ABIRA WISNUNGGAL

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PROFESSIONAL SUMMARY

Final-year Data Science student at Nusa Mandiri University (**GPA 3.73**) with **1.5+ years** of experience building LLM applications (RAG, Text-to-SQL) and ML models for classification and forecasting. Recognized with a **Bronze Medal at PeDaS x Aptikom 2025** and ranked **Top 160 of 448 teams (97.12% accuracy)** at Satria Data. Hands-on experience with **LLM systems (Hybrid RAG, Knowledge Graph, Text-to-SQL, vector database)**, scalable AI infrastructure (Docker, Celery, RabbitMQ) and classical ML. Experienced in data annotation and ground-truth **labeling for BYD France's autonomous driving** project, alongside data analysis and BI dashboard development using Looker Studio and Tableau.

TECHNICAL SKILLS

AI, ML & LLM : RAG, Knowledge Graphs, Text-to-SQL, Azure OpenAI, prompt engineering, vector embeddings, LLM evaluation, scikit-learn, XGBoost, YOLOv8, time series forecasting (SARIMA, Prophet, LSTM), TensorFlow, PyTorch.
Backend & Infrastructure : FastAPI, REST APIs, Docker, Docker Compose, RabbitMQ, Celery, Redis, asynchronous processing.
MLOps & Data : Model deployment, API integration, performance monitoring, feature engineering, data preprocessing, validation, transformation, anomaly detection.
Databases : PostgreSQL, MySQL, pgvector.
Data & Visualization : Pandas, NumPy, Tableau, Looker Studio, data annotation.
Languages : Indonesian (Native), English (Professional Working Proficiency).

PROFESSIONAL EXPERIENCE

National Research and Innovation Agency (BRIN RI) - **Thamrin, Jakarta** **Sep 2026 - Present**
AI Engineer Intern

- Built an AI Bibliometrics question answering system on a 15 table PostgreSQL database (20 publications, 138 authors, 344 keywords). An LLM-based router sends each question to SQL, vector search, semantic search, knowledge graphs. Evaluated on 94 test queries: **82.6% search relevance and 88.6% retrieval success rate.**
- Built a Text-to-SQL pipeline with Qwen2.5-Coder, sqlglot, and PostgreSQL, with query validation rules that let users ask bibliometric questions in natural language.
- Added safeguards including read-only database access, SQL injection protection, 10-second query timeouts, **60 requests/minute rate limiting**, and citation verification, with 726 unit/integration tests, 38 live E2E tests, and 12 retrieval regression tests passing.

Kupu ID (Subsidiary Sinarmas Group) - **Thamrin, Jakarta** **Aug 2026 - Sep 2026**
Data Annotator

- Annotated real road scenes for BYD France's autonomous driving project, producing ground-truth labels **across 10+ km** of road for lanes, road borders and edges, stop lines, road markers, parking slots, and other road structures.
- Labeled lane centerlines based on driving direction and lane type, covering one-way and two-way roads as well as general, emergency, bus, non-motorized, tram, specialized lanes and detailed road markings boundaries at intersections, including line intersections, colors, thickness, guidance markings, deceleration lines, and faded markings to maintain consistent ground-truth data across different road conditions.

Nawa Darsana Technology (Nawatech) - **Bintaro, Tangerang** **Oct 2025 - Feb 2026**
Machine Learning Engineer Intern

- Developed Demolabs AI Chatbot to answer analytics questions using QnA retrieval, RAG-based Text-to-SQL, PDF analysis, dynamic charts, and intent routing. Tested 60 cases with DeepEval, **achieving 0.885 mean answer correctness.**
- Built the backend with FastAPI, Celery, RabbitMQ, Redis, and Docker, using 6 containers, 5 RabbitMQ queues, and 4 Celery workers to handle QnA, PDF, and SQL-based data processing.
- Developed the RAG and Text-to-SQL pipeline with pgvector and Azure OpenAI embeddings, including schema retrieval and few-shot SQL generation. On 60 benchmark queries, the system **averaged 3.23s end-to-end latency**, with 0.40s for retrieval and 2.57s for LLM generation.
- Created an automated LLM evaluation and regression-testing setup with DeepEval and Azure OpenAI, generating Excel and Markdown reports to track results across 60 test cases and different difficulty levels.

GAO TEK INC. - **New York, America** **Oct 2025 - Jan 2026**
AI Chatbot Development Intern (Remote)

- Built an AI chatbot using LLM-based conversation, intent classification, and context-aware responses, **reaching around 88% intent classification accuracy** across tested queries.
- Implemented semantic search and embedding-based retrieval, including query preprocessing, document chunking, and similarity matching, **achieving ~88% intent classification accuracy on internal test queries.**
- Tested chatbot performance across response accuracy, retrieval quality, and latency. Tuned prompts and retrieval to bring **average response time to ~2.5 seconds.**

HOME CREDIT INDONESIA - **Kebagusan, Jakarta** **Sep 2025 - Nov 2025**
Data Scientist Intern (Remote)

- Analyzed customer and operational data using Python and SQL to identify patterns and key metrics across multiple datasets.
- Prepared and validated **5+ datasets** through data cleaning, transformation, and quality checks.

PPM Al Faqih Mandiri - Depok, Indonesia **Aug 2023 - Jun 2025**
Data Analyst

- Built **4 interactive Looker Studio dashboards** to monitor syllabus coverage, student progress, and assessment results across multiple departments.
- Consolidated student progress data from spreadsheet-based masterfiles into a centralized reporting pipeline, **covering 950+ records** and reducing manual data preparation for recurring reports.

PROJECTS

DemoLabs AI Chatbot (Nawatech Internship) **Oct 2025 - Feb 2026**

- Multi-capability analytics assistant combining QnA retrieval, RAG-based Text-to-SQL generation, PDF/OCR document analysis, and dynamic chart creation into a single conversational interface, deployed on an async microservice architecture (Docker, Celery, RabbitMQ).

Demo Video **GitHub**

nuxio.ai **Sep 2026 – Present**

- Designed an AI-powered financial planning platform integrating a Gemini-based Financial Copilot with a forward-looking financial forecasting system, featuring multi-wallet management, budgeting, savings goals, and scheduled transaction planning using Next.js, TypeScript, PostgreSQL (Supabase), and structured AI outputs.

Student Progress Analytics Dashboard **Jan 2025 - Apr 2025**

- Interactive Looker Studio dashboard tracking Qur'an and Hadits memorization progress across student cohorts, aggregating per-student completion rates into class- and cohort-level summary metrics for curriculum monitoring.

Sentiment Analysis Telco Tweets **Jun 2025 - Sep 2025**

- Applied TF-IDF and Logistic Regression to classify customer sentiment from ~10,000 telecom tweets. Achieved 0.82 F1-score and identified top recurring negative keywords for service improvement recommendations.

Time Series Forecasting Top 5 Car Sales Indonesia **Jul 2024 - Sep 2024**

- Built a full forecasting pipeline covering data preprocessing, trend and seasonality analysis, and multi-model training across SARIMA, Prophet, and LSTM. Achieved SMAPE below 10% across all 5 car brands. Achieved SMAPE below 10% across all 5 car brands.

Traffic Monitoring System using YOLOv8 + DeepSORT **Jun 2024 - Jul 2024**

- Built a real-time traffic monitoring system combining YOLOv8 for vehicle detection and DeepSORT for multi-object tracking. Implemented persistent vehicle ID tracking across video frames for traffic flow analysis and vehicle counting.

EDUCATION

Nusa Mandiri University - Depok, Indonesia **Sep 2023 - Present**
Data Science: Current GPA (3.73 / 4.00)

- **Relevant Coursework** : Machine Learning, Deep Learning, Natural Language Processing, Data Mining, Statistical Inference, Cloud Computing, Data Visualization, Text Mining.
- **Honors and Awards** : Bronze Medal PeDaS x APTIKOM (Pesta Data Nasional) 2025, Ranked Top 160 out of 448 teams in the Satria Data Competition with a 97.12% accuracy score during the preliminary stage. Agentic AI Hackathon. Top 5 Abstract Competition, 3rd Place at International IoT Contest and Qualified Scientific Paper organized by Bank Indonesia.

CERTIFICATIONS

Associate Data Scientist - BNSP (National Professional Certification Agency)
Python Advanced for Data Science - Skilvul
Data Analytics Intensive Bootcamp - RevoU
Data Visualization - Dicoding Indonesia