

EDUCATION

- Bandung Institute of Technology (ITB)

Bachelor of Information System and Technology

Relevant Coursework: Artificial Intelligence Fundamentals, Natural Language Processing, Speech Recognition, Data Mining, Data Analytics, Algorithms and Data Structures, Object-Oriented Programming, Probability and Statistics, Database Modeling.

Bandung, Indonesia

June 2022 – 2026 (Expected)

SKILLS SUMMARY

Languages	Python, SQL, C++, Shell Scripting
AI & GenAI	LLMs, Agentic RAG, Transformers, LoRA, Quantization
AI Frameworks	PyTorch, Hugging Face, LangChain, LangGraph, Scikit-learn
Backend & APIs	REST APIs, Webhooks, SIP, Asynchronous Processing, Event-Driven Systems
Cloud & DevOps	AWS (EC2, S3, ECS, SQS, EventBridge), Kubernetes, Docker, CI/CD
Databases	PostgreSQL, Redis, FAISS, Chroma, Pinecone, Qdrant
Data & Vision	Pandas, NumPy, OpenCV

EXPERIENCE

- AI Center ITB

AI Research Assistant

- Built an agentic AI platform using LangChain and LangGraph for multi-step LLM orchestration.
 - Developed a hybrid RAG pipeline with Qdrant, dense embeddings, BM25 retrieval, and citation-grounding controls.
 - Implemented prompt versioning and an offline GEPA-based prompt-tuning workflow to evaluate and optimize complete LLM prompt templates on frozen evaluation cases.
 - Integrated local and hosted LLM providers, including Ollama and OpenAI-compatible APIs, through configurable Python services.
 - Added Langfuse tracing, reproducibility metadata, and persisted artifacts for debugging, monitoring, and experiment audits.
 - Built an LLM-as-a-Judge and blind human-review evaluation workflow using frozen, pseudonymized evaluation packets to assess output faithfulness, actionability, coherence, completeness, and inter-rater agreement.

Bandung, Indonesia

April 2026 – Present
- Neuram

AI Software Engineer

- Scaled production Voice AI systems to support over **40,000 conversations** and **1,500+ hours** of active voice traffic by integrating telephony, AI agents, and event-driven backend workflows.
 - Reduced perceived conversational latency by **60%** by optimizing real-time audio streaming and response handling for faster initial playback.
 - Reduced perceived inbound pickup latency by **over 80%** by parallelizing call initialization and backend provisioning while triggering immediate pre-opening audio.
 - Reduced database response latency by **96%** and API payload sizes by over **96%** by optimizing SQL queries, data parsing, and payload structures.
 - Enabled real-time personalized AI interactions by integrating external APIs to retrieve client data and dynamically inject contextual information into AI agents.
 - Eliminated manual post-call reporting delays by automating conversation processing, structured analytics generation, and delivery of results to client systems.
 - Expanded autonomous agent capabilities by implementing server-side tool execution for real-time business logic and external system interactions during live conversations.
 - Reduced LLM operational costs by **over 88%** while maintaining production-level performance by optimizing model deployment and serving architecture across staging and production environments.

Jakarta, Indonesia

Feb 2026 – Present
- AI Center ITB

AI Research Assistant (RAISA Project – SKK Migas)

- Increased manual data-query accuracy from **28–33% to 82.7%** by implementing a deterministic response layer using Qdrant semantic retrieval and structured query templates.

Bandung, Indonesia

Oct 2025 – Dec 2025

- Increased out-of-scope rejection precision from **88.3% to 99.0%** across **103 negative test cases** by implementing strict-match intent validation and retrieval safeguards.
- Improved recurring-query reliability by developing deterministic SQL template routing that bypassed generative execution and directly bound user variables to validated query templates.
- Strengthened SQL output reliability by integrating an independent Evaluator Agent to validate generated results against user intent before response delivery.
- Streamlined knowledge-base maintenance by engineering an asynchronous Excel ingestion pipeline for batch uploading, overriding, and updating template question-response pairs.

• Bandung Institute of Technology

Bandung, Indonesia

March 2025 – Dec 2025

AI Research Assistant

- Achieved **100% defect detection accuracy** for partial-discharge signals by developing a real-time LSTM-Attention classification system with faculty researchers.
- Reduced local inference latency to **milliseconds** by optimizing and deploying signal-processing models on FPGA and Raspberry Pi 5 for real-time industrial monitoring.
- Built a **2,312-sample** partial-discharge signal dataset by engineering the acquisition, cleaning, and preprocessing pipeline using Analog Discovery 2.
- Enabled real-time equipment-health monitoring by deploying an end-to-end dashboard for predictive status and signal visualization.

• PT. Solutopia Untuk Nusantara (SPUN)

Jakarta, Indonesia

July 2025 – Sept 2025

AI Engineer Intern

- Automated **85% of repetitive customer inquiries** by architecting and deploying a production AI assistant for global visa services.
- Reduced customer response time from a **30-minute manual baseline to under 5 seconds** by automating multi-turn customer-support interactions.
- Supported a **10x surge in concurrent requests** by designing an asynchronous AWS architecture using ECS, SQS, and EventBridge.
- Improved response grounding for dynamic visa regulations by engineering a multi-source retrieval pipeline using Pinecone and PostgreSQL.
- Reduced deployment cycles to minutes by automating build and release workflows through AWS CodePipeline.

PROJECTS

- **ChatDoctor [Code]** : Earned **Top-10 National Finalist**. Developed an LLM-powered healthcare chatbot for context-aware medical information delivery. Tech: LLM, Python.
- **BattleTalk [Code]** : **Top 10 Finalist** at FindIT UGM. Built an AI-powered English learning application with gamification and LLM-based conversational capabilities. Tech: Vite, Qwen2.5, Supabase, Ollama, Node.js.
- **Trash Reporting System [Paper]** : **National Finalist** at GEMASTIK XVII. Developed an automated trash-reporting system using custom YOLOv8 models for real-time object detection. Tech: YOLOv8, Computer Vision, Python.
- **RoadEye [Code]** : **Top 20 Teams** at GDSC Hackfest. Built an AI-based traffic monitoring system for anomaly detection and traffic-density analysis. Tech: Next.js, Python, PostgreSQL, AI.
- **Marketplace Recommender System [Presentation]** : **1st Place** at Hology 7.0. Developed marketplace optimization through clustering, recommender systems, and interactive Tableau dashboards. Tech: K-Means Clustering, Tableau, Python.

LEADERSHIP & ORGANIZATION

• Data Community HMIF ITB

Bandung, Indonesia

June 2024 – Present

Head of Community

- Directed data science and machine learning initiatives for the student community and coordinated technical workshops focused on data engineering and analytics.

• Google Developer Student Club ITB

Bandung, Indonesia

Sept 2023 – Aug 2024

Curriculum Developer

- Designed a structured Machine Learning curriculum, technical roadmap, and hands-on assignments for **800+ members**.

• STEI-K Student Council

Bandung, Indonesia

Nov 2022 – Oct 2023

Database Division Staff

- Processed student data and generated analytics reports using Python, Pandas, and Excel; awarded **Best Staff of the Month (Feb 2023)**.

INVITED SPEAKER

- **Symphony of Data: The Key to Brilliant Decision Making** [\[Certificate\]](#) KAT ITB, 2024
Guest Speaker
 - Presented the strategic use of data analytics for decision-making at a centralized training event.
- **Data Competition Strategies** [\[Certificate\]](#) Kaderisasi Wilayah STEI-K ITB, 2024
Guest Speaker
 - Presented data-analysis and machine-learning strategies for student competitions.
- **Introduction to Data Science** SPARTA HMIF 2023, 2024
Guest Speaker
 - Delivered an introductory session on data science concepts and career paths for incoming students.

CERTIFICATIONS

- **Data Scientist Professional Certificate** [\[Certificate\]](#) : DataCamp professional certification covering data management, exploratory analysis, statistics, model development, and production coding.
- **Data Analyst Professional Certificate** [\[Certificate\]](#) : DataCamp professional certification covering analytics fundamentals, visualization, and reporting.
- **Kalbe Nutritionals Data Scientist Internship** [\[Certificate\]](#) : Awarded **Certificate of Achievement** for Machine Learning implementation and business-acumen application.
- **Data Analysis Certification (FreeCodeCamp)** [\[Certificate\]](#) : Hands-on certification covering NumPy, Pandas, Matplotlib, and Seaborn.
- **Machine Learning with Python (FreeCodeCamp)** [\[Certificate\]](#) : Coursework and implementation of machine-learning algorithms using Python.

HONORS AND AWARDS

- **1st Place, Hology 7.0 Data Mining (National)** [\[Certificate\]](#) : **1st Place** among **235 teams**; developed a marketplace optimization solution using K-Means clustering and Tableau dashboards.
- **National Finalist (Top 20), GEMASTIK XVII Data Mining** [\[Certificate\]](#) : **National Finalist (Top 20)**; developed an AI-powered trash-reporting and detection system using custom YOLOv8 models.
- **Top 10 Finalist, Data Science National Tournament** [\[Certificate\]](#) : **Top 10 Finalist**; developed ChatDoctor, an LLM-powered healthcare chatbot.
- **Top 10 Finalist, Objective Quest Unair (Aironology 3.0)** [\[Certificate\]](#) : **Top 10 Finalist** among **100+ teams** for a data-driven air-quality monitoring solution.
- **Top 10 Finalist, FindIT Data Analytics Competition UGM** [\[Certificate\]](#) : **Top 10 Finalist** among **200+ teams** in a national data analytics and predictive-modeling competition.
- **Top 10 Finalist, FindIT UGM Hackathon – 2025** [\[Certificate\]](#) : **Top 10 Finalist**; engineered an AI-powered English learning application using Vite, Qwen2.5, and Supabase.
- **Top 10 Finalist, Ristek Datathon UI – 2025** [\[Certificate\]](#) : **Top 10 Finalist** among **200+ participants** in a machine-learning optimization competition.
- **National Finalist (Top 20), GEMASTIK XVI Data Mining** [\[Certificate\]](#) : **National Finalist (Top 20)**; developed a YOLOv8-based traffic-condition monitoring system for real-time anomaly detection.
- **Top 20 Teams, GDSC Hackfest Indonesia** [\[Certificate\]](#) : **Top 20 Teams**; built RoadEye, a traffic-monitoring platform combining Next.js with Python-based AI analytics.