Wiqi Lee

Data Scientist, AI/ML Researcher and Software Engineer

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SUMMARY

Data scientist, AI/ML researcher and software engineer with more than a decade of freelance and project-based experience since 2014 across software development, data analytics, automation and applied research. Delivered over 100 assignments for academic, corporate, government and international clients. Recent work focuses on auditable AI: guarded agents, verified data migrations and incident analysis. Works in English and Indonesian.

SELECTED ACHIEVEMENTS

- Winner, Blog Post Prize, Auth0 Hackathon, for Vettra (AI agent authorization)
- Peer-reviewed research in NLP and sentiment analysis: 94 citations and an h-index of 3 on Google Scholar
- 100+ software, data and research assignments delivered for clients since 2014
- 10 featured AI projects, 8 with public live demos; full portfolio at wiqilee.dev

SKILLS

Languages	Python, TypeScript, Rust, Go, SQL, JavaScript, Java, Julia
AI and ML	PyTorch, LangGraph, Hugging Face, Ollama, scikit-learn, LLM agents, function calling, NLP, sentiment analysis, model evaluation
Data	Pandas, Spark, Airflow, dbt, Snowflake, BigQuery, PostgreSQL, data validation and reconciliation
Software	FastAPI, Django, Node.js, React, Next.js, REST APIs, WebAssembly
Cloud and tools	Docker, Kubernetes, Terraform, AWS, Google Cloud, Vercel, Git
Research	Experimental design, statistical analysis, SPSS, LaTeX, Scopus-indexed publishing

EXPERIENCE

Independent Technology, Data and Research Consultant 2014 to present
Remote, project-based

- Gathered requirements and delivered software, analytics and automation from working prototype to documented result.
- Built Python and SQL workflows for data preparation, statistical analysis, predictive modeling, validation and reporting.
- Supported researchers from idea to publication: refining research questions and study designs, advising on methods and analysis, and proofreading manuscripts through submission and revision.
- Tested and debugged software and AI-assisted workflows with explicit validation rules, review steps and traceable results.

SELECTED PROJECTS

Vettra Winner, Blog Post Prize, Auth0 Hackathon
Authorization layer for AI agents: each action is approved automatically, routed to a human or denied before it runs, with hash-chained audit records verified in Rust/WebAssembly. Tech: Python, Rust/WASM, Auth0 Token Vault, React. Demo: vettra-eight.vercel.app. Code: github.com/wiqilee/Vettra. Article: wiqilee.dev/blog.

MoveProof Nebius × NVIDIA Global AI Hackathon 2026
AI-assisted data migration with human-approved field mappings, deterministic validation and independent reconciliation reports that prove what changed. Tech: Python, FastAPI, PostgreSQL, Rust, Next.js, NVIDIA Nemotron. Demo: moveproof-wiqi.vercel.app. Code: github.com/wiqilee/Moveproof. Article: wiqilee.dev/blog.

Kinproof 4 humanoid robots supported

Preflight checks for humanoid robot policies against the exact MJCF model, with drift detection, human countersignatures and SHA-256 sealed reports. Supports Asimov 1, Unitree G1, Unitree H1 and Booster T1. Tech: Python, Rust, three.js, MuJoCo. Demo: kinproof-lab.vercel.app.

ARIA

Healthcare data integration prototype that combines medication data through FHIR R4 and flags multi-drug interaction risks for clinician review, using synthetic data only. Tech: TypeScript, FastAPI, FHIR R4, Gemini, Google Cloud Run. Demo: aria-polypharmacy.vercel.app. Code: github.com/wiqilee/ARIA. Article: wiqilee.dev/blog.

Arrearly Build with Gemini XPRIZE

Accounts receivable automation that ranks overdue invoices by payment likelihood and proposes follow-up actions within policy and human-review controls. Tech: TypeScript, Python, Gemini, Google Cloud. Demo: arrearly.vercel.app. Code: github.com/wiqilee/Arrearly. Article: wiqilee.dev/blog.

VoxGuard

Real-time scam detection for live calls that scores manipulation tactics while the conversation is still in progress. Tech: JavaScript, Python, Rust/WASM audio processing, Gemini Live API. Demo: voxguard-kappa.vercel.app. Code: github.com/wiqilee/VoxGuard. Article: wiqilee.dev/blog.

Assumption Miner GitLab AI Hackathon 2026

GitLab Duo agent that surfaces the implicit assumptions a codebase depends on before they turn into incidents. Tech: TypeScript, Python, Rust/WASM, GitLab Duo. Demo: assumption-miner.vercel.app. Code: github.com/wiqilee/assumption-miner. Article: wiqilee.dev/blog.

Three more AI projects (Reflex, Grounds, Phoenix) and every public repository: wiqilee.dev.

EDUCATION

Master of Information Technology Management
Institut Teknologi Sepuluh Nopember (ITS), Surabaya, Indonesia
Thesis on aspect-based sentiment analysis using probabilistic latent semantic analysis, word embeddings and LSTM.

Summer School: Macro, Money and Finance
Princeton University (online)

Bachelor of Information Systems
STIKOM Surabaya (now Universitas Dinamika), Surabaya, Indonesia

PUBLICATIONS

Published under the name Dewi Ayu Khusnul Khotimah.

Sentiment Analysis of Hotel Aspect Using Probabilistic Latent Semantic Analysis, Word Embedding and LSTM. *International Journal of Intelligent Engineering and Systems*, 12(4), 2019. doi:10.22266/ijies2019.0831.26

Sentiment Detection of Comment Titles in Booking.com Using Probabilistic Latent Semantic Analysis. *6th International Conference on Information and Communication Technology (ICoICT)*, IEEE, 2018.

Analisis Penerimaan Penerapan PARIS (Parking Information System) dengan Metode Technology Acceptance Model (TAM) pada Area Parkir Stikom Surabaya. *Jurnal Sistem Informasi (JSIKA)*, 5(9), 2016. In Indonesian.

CERTIFICATIONS

Management and Operations Competency, BNSP (2026). Macro, Money and Finance Summer School, Princeton University (2025). AI Ethics (MDL-220), IBM (2025). NVIDIA Deep Learning Institute (2025): AI on Jetson Nano, Disaster Risk Monitoring Using Satellite Imagery, and six OpenUSD courses.