

Rhendiya Maulana Zein, M.Eng., S.T.

Quantitative Systems & Industrial Strategy Analyst

Jakarta / Yogyakarta, ID | rhendiya@gmail.com | +62-887-525-6272 | linkedin.com/in/rhendiyaamz | rhendiya.my.id

PROFESSIONAL SUMMARY

Quantitative Systems Analyst with dual engineering degrees from Universitas Gadjah Mada (Master's Valedictorian, GPA 3.99/4.00; Bachelor's Top 3 Graduate, GPA 3.70/4.00). Combines rigorous computational physics modeling, predictive econometric inference, and energy infrastructure evaluation. Proven executive leadership record directing 150+ organizational projects, multi-million operational budget allocations, and interdisciplinary field governance missions across industrial, governmental, and academic ecosystems.

EDUCATION

Master of Engineering in Engineering Physics

Universitas Gadjah Mada

Feb 2024 – Dec 2025

Yogyakarta, Indonesia | GPA: 3.99 / 4.00

- **Valedictorian / Best Graduate** (*Lulusan Terbaik*) of the Master's Program Cohort (January 2026).
- Grantee of **Degree By Research (DBR) Scholarship** from the National Research and Innovation Agency (BRIN).
- **Focus Areas:** Computational Systems Engineering, Multiphysics Analysis, Stochastic System Dynamics, and Dynamic Control Systems.

Bachelor of Engineering in Nuclear Engineering

Universitas Gadjah Mada

Aug 2019 – Oct 2023

Yogyakarta, Indonesia | GPA: 3.70 / 4.00

- **Graduated Cum Laude**, Ranked Top 3 in Department (Top 10% Faculty of Engineering, November 2023).
- Recipient of **YBM BRI Smart Scholarship** (2020–2021) for outstanding academic merit and leadership distinction.

STRATEGIC & NATIONAL ENGAGEMENTS

Energy Infrastructure & Reliability Framework

Module Development Specialist | Joint Project: PT PLN (Persero) Pusdiklat & UGM

May 2026 – Dec 2026

Yogyakarta, ID

- Appointed via Dean's Decree (SK Dekan FT UGM No. 2520506/UN1.FTK/SK/HK/2026) to develop strategic Job Competency (KKJ Level 3) frameworks aligned with the national PLN Directory of Competencies 2024.
- Authored operational governance, commissioning risk protocols, and emergency response frameworks for nuclear power generation infrastructure across normal, transient, and shutdown operational regimes.
- Formulated quantitative reliability and safety margin matrices across mechanical, electrical, instrumentation & control (I&C), and thermal cooling subsystems to ensure regulatory safety compliance.

Commercial Venture Architecture

Founder & Venture Lead | Uni Quest (kineticquiz.id)

Mar 2024 – Present

Yogyakarta, ID

- Conceptualized, launched, and scaled a high-throughput digital assessment marketplace with automated payment infrastructure, real-time exam engines, and multi-tenant cloud synchronization.
- Engineered high-concurrency transaction and row-level data-locking architectures to eliminate payment race conditions, double checkouts, and concurrent test submission conflicts.
- Managed end-to-end commercial operations, unit economics optimization, customer acquisition funnels, and enterprise security governance standards across all corporate touchpoints.

ADVANCED QUANTITATIVE ANALYTICS

Lead Quantitative Analyst

G. Intelligent & Embedded Systems Research Group & RSUP dr. Sardjito

Feb 2024 – Jun 2026

Yogyakarta, ID

- Architected predictive deep learning diagnostic architectures on 8,700+ high-dimensional clinical data points, achieving a 17% precision gain and reaching 97% overall diagnostic classification accuracy.
- Published empirical research findings in Scopus Q2-indexed *IAES International Journal of Artificial Intelligence*, proving mathematical robustness through extensive hyperparameter sensitivity tuning.
- Secured 1,390+ proprietary clinical data points and established 3 inter-institutional research collaborations through direct negotiations and technical presentations with senior hospital directors.

INDUSTRIAL RESEARCH MEMORANDUM

Strategic Assessment: Indonesian Mineral Downstreaming

Working Paper, 2026

Lead Investigator | Trade Balance Resilience, Smelter Margins, and Bank Syndication Risk

Strategic Research

- Evaluated firm-level capital accumulation, domestic value-added (DVA) capture, and export market concentration (Herfindahl-Hirschman Index $HHI > 4,500$) across regional nickel and bauxite smelter corridors.
- Stress-tested smelter operating margins, debt serviceability coverage ratios (DSCR), and domestic banking syndication credit risk exposure against international commodity cycle shocks and export bans.
- Modeled macroeconomic spillovers and regional employment multipliers by linking BPS Large and Medium Manufacturing (IBS) microdata with national input-output tables (2019–2025).

EXECUTIVE LEADERSHIP & GOVERNANCE

Chairman (Ketua Himpunan)

Nov 2021 – Nov 2022

Nuclear Engineering and Engineering Physics Student Association (KMTNTF UGM)

Yogyakarta, ID

- Commanded 120+ active staff directing the full lifecycle of 150+ academic, industrial, and social initiatives, achieving a 95% target execution rate across the 12-month tenure.
- Defended institutional budget proposals before faculty executive boards, successfully negotiating and securing a 5x funding expansion (IDR 50M) from previous fiscal baselines.
- Overhauled administrative protocols and program approval governance, reducing operational turnaround times by 50% while establishing 2 new Semi-Autonomous Bodies (BSO).

Village Mission Coordinator (Kordes KKN-PPM)

Dec 2022 – Feb 2023

Directorate of Community Service UGM — Maluku Deployment

Maluku, ID

- Commanded 14 university researchers across 60 days of offshore deployment in remote coastal communities under severe geographical and infrastructural constraints.
- Negotiated multi-stakeholder agreements with customary village heads (*Raja*) and sub-district agencies to execute 70 socio-technical programs with an exemplary 100% safety record.

Advisory Board Coordinator (DPO) & Environmental Governance

Feb 2021 – Nov 2023

KMTNTF UGM & Student Executive Board (BEM FT UGM)

Yogyakarta, ID

- Provided strategic counsel and operational risk oversight to executive leadership as DPO Coordinator (2022–2023); mediated multi-party disputes and safeguarded institutional governance continuity.
- Co-founded the Ministry of Environment at BEM FT UGM (2021) as Ministry Treasurer; structured financial frameworks, recruited 60 staff, and executed 15 university-wide sustainability programs.
- Implemented automated financial reconciliation workflows, reducing administrative processing bottlenecks and paper overhead.

PROFESSIONAL HONORS & CERTIFICATIONS

Academic Honors & Fellowships

- **Valedictorian / Best Graduate** (*Lulusan Terbaik*), Master of Engineering Physics, Universitas Gadjah Mada (Jan 2026).
- **Top 3 Graduate** (*Cum Laude*, Top 10% Faculty of Engineering), Bachelor of Nuclear Engineering, UGM (Nov 2023).
- **BRIN Degree By Research (DBR) Full Fellowship**, National Research and Innovation Agency (2024–2025).
- **YBM BRI Smart Scholarship Awardee**, Yayasan Baitul Maal Bank Rakyat Indonesia (2020–2021).

Executive Analytics & Engineering Certifications

- **Developing Large Language Models (LLMs)** | DataCamp Certified
- **Associate Data Scientist Professional Track** (Python, SQL, Predictive Modeling) | DataCamp Certified
- **DeepLearning.AI TensorFlow Developer Specialization** | Coursera / DeepLearning.AI
- **Google IT Automation with Python Professional Certificate** | Coursera / Google

COMPETENCY & SYSTEMS ARSENAL

Quantitative & Systems Modeling	System Dynamics, Monte Carlo Simulation, Econometric Regression, Longitudinal Panel Data (BPS Microdata), Predictive Machine Learning, Multi-Variable Optimization, Stochastic Risk Modeling.
Infrastructure & Industrial Strategy	Nuclear Power Plant Reliability Protocols (KKJ Level 3), Safety Margin Analysis, Mineral Downstreaming Value Chains, Smelter Margin Stress-Testing, Commodity Volatility Analysis.
Enterprise Tools & Computing	Python (Pandas, Polars, Statsmodels, Scikit-Learn, PyTorch), SQL (PostgreSQL), Microsoft Power BI, Docker, Linux Systems, Git, Google Cloud Platform (GCP), LaTeX.
Corporate Governance & Leadership	Multi-Stakeholder Alignment, Capital Budget Defense, Operational Risk Oversight, Regulatory Compliance, Public Speaking, Strategic Negotiation, Cross-Functional Team Leadership.