

Dino Arla

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EDUCATION

Sepuluh Nopember Institute of Technology (ITS)

Engineer's degree (Ir) - GPA 3.79/4.00

- Professional Engineer Program

Surabaya, Indonesia

Aug 2025 - Feb 2026

Sepuluh Nopember Institute of Technology (ITS)

Master's of Technology Management (M.MT) - GPA 3.63/4.00

- Major in Business Analytics.
- Thesis on "Optimization of Electricity Theft Detection Based on Automated Machine Learning Through Multivariable and Cost-Sensitive Learning Approaches: A Case Study at PT PLN (Persero) Distribution Unit of West Java", supervised by Dr. Achmad Choiruddin, S.Si., M.Sc.
- Awardee of 2025 Interdisciplinary School of Management & Technology Research Grant Scheme.

Surabaya, Indonesia

Aug 2023 - Aug 2025

Tanjungpura University

Bachelor of Engineering (ST) - GPA 3.45/4.00

- Major in Control Engineering.
- Final Project on "AQORTA (Air Quality and Noise Real Time Data Acquisition): An Integrated Air Quality and Noise Telemetry System with Solar Power System", supervised by Dr. Eng. Ir. Ferry Hadary, ST., M.Eng., IPM., CRA.
- Dean of the Faculty of Engineering Award for Fastest Graduate.

Pontianak, Indonesia

Sep 2013 - Jul 2017

RESEARCH INTEREST

My research focuses on machine learning applications in critical energy infrastructure, with particular interest in non-technical loss (NTL) mitigation, probabilistic modeling of customer behavior under uncertainty, and optimization-driven approaches including constrained cost minimization under asymmetric penalty structures and non-linear search strategies for automated model selection. I am interested in how these methods can be made more reliable, interpretable, and operationally robust in high-consequence deployment environments.

PUBLICATIONS & BOOK

- **Arla, D.**, & Arief, M. M. (2026). A Spatiotemporal Machine Learning Model for Electricity Theft Risk Scoring in Power Distribution: Spatial Lag-Augmented XGBoost with Empirical Evidence from PLN West Java. 2027 International Conference on Electricity Distribution (CIRED 2027) **(Under Review)**.
- Firdaus, R.W., **Arla, D.**, Haramaini, Q., & Arief, M. M. (2026). Particle Swarm Optimization of Air Gap Distance for Externally Gapped Line Arrester (EGLA) on High Isokeraunic 70 kV Transmission Line Based on Field-Measured Lightning Data. 2026 International Conference on Technology and Policy in Energy and Electric Power (ICT-PEP) **(Under Review)**.
- Haramaini, Q., **Arla, D.**, & Sidiq, M. H. (2026). Zonal Electricity Pricing Based on Substation Capacity: Leveraging Oversupply for Economic Equity and Industrial Competitiveness in Indonesia. The 18th International Conference on Information Technology and Electrical Engineering 2026 **(Under Review)**.
- **Arla, D.**, & Choiruddin, A. (2025). Machine Learning-based Electricity Theft Detection Considering Customer Consumption Pattern and Geographical Condition. 2025 International Conference on Data Science and Its Applications (ICoDSA), 534–539. <https://doi.org/10.1109/ICoDSA67155.2025.11157579>
- **Arla, D.**, Sanjaya, C. W., Hidayah Sidiq, M., Haramaini, Q., & Fadliqaf, S. H. (2025). Eco En Liza (Utilization of Diesel Engine Coolant Waste Energy as a Source of Electricity for Micro Hydroelectric Power Plants). 2025 International Conference on Technology and Policy in Energy and Electric Power (ICT-PEP), 348–353. <https://doi.org/10.1109/ICT-PEP67281.2025.11232224>
- Haramaini, Q., **Arla, D.**, & Sidiq, M. H. (2025). EnerBit (Energy to Bitcoin): A Strategy Model for Monetizing Idle Power Surplus into Indonesia National Foreign Exchange. The 5th ASEAN International Conference on Energy and Environment (AICEE), 138–138.

- Haramaini, Q., Setiawan, A., Sidiq, M. H., **Arla, D.**, & Garniwa, I. (2024). Exploring the Relationship between Solar Panel Adoption and Socio-Economic Factors: A Case Study of Urban Households in Developing Countries. *Journal of Electrical Systems*, 20(5s), 2737–2754. <https://doi.org/10.52783/jes.2756>
- Sidiq, M. H., **Arla, D.**, Fadliqaf, S. H., & Haramaini, Q. (2024). Anti Theft Power Smart Metering System. 2024 International Conference on Technology and Policy in Energy and Electric Power (ICTPEP), 287–290. <https://doi.org/10.1109/ICT-PEP63827.2024.10732892>
- Haramaini, Q., **Arla, D.**, & Garniwa, I. (2023). A Telemetry System for Real-Time Air Quality and Noise Monitoring in Urban Areas Based on IoT Technology. *Tuijin Jishu/Journal of Propulsion Technology*, 44(6), 446–455.
- Hadary, F., Rezeki, S., Jati, D., **Arla, D.**, & Setyawan, W. (2023). *Inovasi Sistem Pengukuran Kualitas Udara Terintegrasi Solar Power System Berbasis Internet of Things (IoT)*. CV. Literasi Nusantara Abadi.

PATENT

Hadary, F., **Arla, D.**, Rezeki, S., Jati, D., & Rustamaji, R. M. (2023). AQORTA (Air Quality and Noise Real Time Data Acquisition) Sistem Telemetri Kualitas Udara dan Kebisingan Terintegrasi Solar Power System (Patent P00202112421).

AWARDS & CREDENTIALS

Best Paper and Best Presenter of ICoDSA 2025	Jul 2025
• <i>The 8th International Conference on Data Science and Its Applications (ICoDSA) 2025 at Jakarta</i>	
3rd Winner of Learning Innovation Knowledge Exhibition (LIKE) 2024	Oct 2024
• <i>PLN Research and Development Centre, Grand Final at Jakarta</i>	
Golden Ticket Awardee of Innovation Contest 2024	Aug 2024
• <i>PLN Research and Development Centre, Regional selection at Padang, West Sumatera</i>	
1st Winner of Innovation Contest 2024	Jun 2024
• <i>PLN Distribution Unit of West Java, Bandung</i>	
1st Winner of Innovation Contest 2022	May 2022
• <i>PLN Distribution Unit of West Java, Bandung</i>	

TEACHING EXPERIENCE

Applied Machine Learning for Business Value Creation: From Data Science to Real-World Strategy	Nov 2025
• <i>Guest Lecture, Faculty of Science and Data Analytics, Department of Statistics ITS</i>	
Knowledge Sharing Forum: “Knowledge to Impact, Toward the Global 500”	Jun 2025
• <i>Speaker, PLN Learning Centre of Pandaan</i>	
Innovation Paper & Presentation	Feb 2025
• <i>Instructor, PLN Nusantara Power, Kapuas Power Generation Unit</i>	
MAGNETO: Machine Learning for Ranking System to Prioritize P2TL Target Operation	Jun 2024
• <i>Instructor, PLN Distribution Unit of West Java</i>	

EMPLOYMENT

Team Leader of Energy Transaction	Bandung, Indonesia
PLN Distribution Unit of West Java	<i>Feb 2023 - Present</i>
• <i>Initiated and led the development of MAGNETO, a machine learning-based ranking system for prioritizing electricity theft (P2TL) operations, enabling data-driven target selection and delivering an estimated annual financial impact of IDR 334 billion in recovered revenue and cost savings.</i>	
Assistant Analyst for Electrical Network and Customer Data Mapping	Bandung, Indonesia
PLN Distribution Unit of West Java	<i>Jan 2022 - Jan 2023</i>
• <i>Developed KINEMATICS 4DX, a performance monitoring and data analytics system integrating spatial and operational data, which enhanced asset and network oversight and generated approximately IDR 271 million in annual efficiency gains and cost savings.</i>	

Assistant Engineer for Transaction Meter Maintenance

PLN Distribution Unit of West Java

Bandung, Indonesia

Jan 2019 - Dec 2021

- *Designed and implemented TX-Cent, a centralized transaction meter execution and monitoring system that improved measurement accuracy and maintenance effectiveness, resulting in approximately IDR 460 million in annual financial gains and operational savings.*

Junior Engineer Technology and Information

Power Plant Sector of Kapuas, PLN Regional Kalimantan

Kubu Raya, Indonesia

Jul 2018 - Dec 2018

- *Created SIMBA Apps, an interactive GUI-based fuel oil information system supporting power plant operations, significantly improving fuel monitoring and control and delivering an estimated annual financial impact of IDR 488 billion in cost savings and efficiency improvements.*

ACADEMIC SERVICE

Co-Supervisor, Undergraduate Thesis

Sepuluh Nopember Institute of Technology (ITS)

Surabaya, Indonesia

Jun - Nov 2025

- *Assisted in supervising a bachelor student's thesis project in the Department of Statistics ITS, focusing on Machine Learning, Anomaly Detection and Spatial Statistics applied to energy distribution data.*

SKILLS

- **Programming:** Python (scikit-learn, pandas, NumPy, matplotlib, seaborn), Julia, MATLAB, SQL
- **Machine Learning:** PyCaret (AutoML), classification, anomaly detection, cost-sensitive learning, spatial statistics
- **Data & Visualization:** Power BI, Tableau, Plotly, Google Colab, Jupyter Notebook, Oracle, ArcGIS
- **Tools & Platforms:** Git, VS Code, Claude Code, Microsoft Excel (advanced)
- **Languages:** Indonesian (native), English (professional working proficiency), Arabic (basic)