

MADE PUTRA

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Summary: AI-powered Energy Management and Data Analytics professional with 6+ years of experience delivering data-driven decarbonization and predictive analytics solutions across Asia Pacific. Certified Energy Manager with strong command of ML modeling, cloud pipelines, and HVAC systems. Proven track record in driving operational savings, integrating digital retrofits, and aligning with global sustainability frameworks.

EDUCATION

UNIVERSITY OF INDONESIA (UI) Depok, Indonesia
Bachelor of Engineering, Marine and Mechanical Engineering | GPA 3.56/4.00 (*Cum Laude*) | 152/144 credits | 09/2014-01/2018
• Honors & Awards: student speaker for ASEAN University Network, student moderator for an international proceeding.

PROFESSIONAL EXPERIENCES

INDEPENDENT CONSULTANT Remote
Energy Management and Data Analytics Consultant 05/2024 – Present

- Delivered advisory on energy management digital transformation and reporting workflows using data analytics tools.
- Designed data pipelines and interactive dashboards to identify potential energy savings in legacy HVAC and BMS systems.
- Improved scalable energy analytics and automated reporting system, enabling instant multi-premise deployment.

AZENDIAN SOLUTIONS Singapore
Sustainability and Data Engineering Consultant 06/2022 – 04/2024

- Successfully delivered five long-term AI-driven energy optimization projects across the Asia Pacific, cutting energy use up to 45% and supporting key accounts that represent 30% of company sustainable revenue.
- Led cross-functional collaboration team designing high-impact hot-water system portfolios in Australia through low-risk validation tests, which supported to a successful regional partnership that supported revenue growth.
- Initiated technical feasibility studies and partner workshops for Japan market expansion, resulting in three pilot engagements.

TEALE Singapore
Senior Energy and Data Engineer 08/2020 – 06/2022

- Drove research and optimization of solar absorption chiller, identifying irradiance data anomalies and executing corrective actions, resulting in a 10% increase in system utilization.
- Developed data-driven airside control logic using real-time ambient and load models, reducing overcooled zones by 95% and enhancing thermal efficiency across assets.
- Designed and implemented an ML-based predictive maintenance framework, increasing fault detection accuracy by 30% and improving scaling opportunities across multiple deployments.
- Led solar PV modeling for off-grid islands in Oceania, optimizing configuration to boost modeled utilization by 20%.

VARIOUS COMPANIES (Synergy Efficiency Solutions | Carrier HVAC | Equinox Shipping Company) Indonesia
Energy Engineer 06/2017 – 07/2020

- Performed in-depth techno-economic evaluation of biomass energy transition, assessing molecular viability of palm kernel fuel and cost-saving levers, contributing to a 60% reduction in energy OPEX cut for global HPL manufacturing.
- Conducted data-driven energy modeling and workflow analysis for 15+ industrial clients, attained a 90% data confidence level, and ascertained IDR 70B in potential savings from audit findings.
- Constructed financial models for energy projects and decreased initial costs by half through optimized cash flow strategies.
- Created market entry and customer acquisition strategies, leading to 30 new B2B foreign customers and 20% sales growth.

PROJECT & RESEARCH

- **Air Quality Alarm Analytics** (*Python, AWS, Docker, REST API*) - designed CO2 alarm for BMS, integrated non-compatible sensors, enabling a centralized alarm system.
- **Energy-less Air Injector** (*ANSYS, Solidworks, CFD*) - Guided a student research team to simulate a novel energy-free air injector for a flat plate ship, resulting in a 10% surface drag reduction (publication [DOI](#)).

LEADERSHIPS & MENTORSHIP

2021 Guest Lecturer, University of Indonesia - Delivered AI-enabled IoT Big Data Analytics in Maritime Transport.
2018 Science Olympiad Teacher - taught underprivileged students in remote areas of Indonesia.
2017 Vice Chairman of University Symphony Orchestra - Managed a community of student orchestras.
2015 Volunteered in Indonesia-Australia people-to-people diplomacy led by the National Resilience Institution.

SKILLS & CERTIFICATION

- **Programming & Tools:** Python (Tensorflow, Scikit-learn, Pandas), Javascript, C, Azure, AWS, SQL, Docker, Git.
- **Energy Simulation & Analytics:** ANSYS, Solidworks, EnergyPlus, IESVE, Power BI, Tableau.
- **IoT and Data Integration:** MQTT, REST API, Modbus, BACnet, Niagara4, OPC, JSON, XML.
- **Certification:** Certified Energy Manager (CEM, credential ID [98835](#)).
- **Languages:** English (Fluent), Indonesian (Native), French (Conversational), and Japanese (Basic).