

# Rafi Indrajaya

Turin, Italy (Willing to relocate) | [mrafiindrajaya@gmail.com](mailto:mrafiindrajaya@gmail.com) | +33 602 92 82 09 | [LinkedIn](#) | [Portfolio](#)

## EXECUTIVE SUMMARY

Master's student in the **Erasmus Mundus Decentralized Smart Energy System (DENSYS)** program, specializing in **clean energy** systems. Experienced in **energy modelling** and **power sector innovation**, with international exposure in **consulting**. Driven to apply this expertise to deliver impactful solutions for the global clean energy transition.

## EDUCATION

**Politecnico Di Torino (2<sup>nd</sup> Year DENSYS)** | *MSc in Energy and Nuclear Engineering* Turin, Italy | **09.2025 – 01.2026**

- **Key Courses:** Polygeneration and Advanced Energy Systems, Smart Electricity Systems, Resources Sustainability.

**Esade Business School** | *Strategy and Innovation Summer School* Barcelona, Spain | **07.2025 – 07.2025**

- Training on **business model canvas** utilization, AI incorporation for sustainable growth, and **strategic management**.

**School of Mines** | *RD20 Summer School* Colorado, USA | **06.2025 – 06.2025**

- Selected as the DENSYS program representative at the G20 Green Transition Summer School.

**University of Lorraine (1<sup>st</sup> Year DENSYS)** | *Master Energie Parcours* Nancy, France | **08.2024 – 07.2025**

- **Key Courses:** Renewable Energy Sources, Energy Storage, Python for Energy Systems; **Grade: 4.00/4.00.**

**Sophia University 上智大学** | *Bachelor of Science, Green Engineering* Tokyo, Japan | **09.2020 – 09.2024**

- Sophia Overseas Designated School **Full-ride Scholarship Awardee.**
- Graduated in the **top 5%** of the green engineering cohort.

**Kantonsschule Hohe Promenade** | *AFS Exchange Program* Zurich, Switzerland | **08.2018 – 07.2019**

- Chosen as one of **16 out of 900 applicants** for the AFS Intercultural Exchange Program from Jakarta, which promotes cultural and academic exchange to foster global citizenship and cross-cultural understanding.

## EXPERIENCE

**Bosch** | *Solid Oxide Fuel Cell (SOFC) Project Business Analyst Intern* Tokyo, Japan | **10.2023 – 03.2024**

- Conducted **market research** with the **global Bosch SOFC team** on business implementation across **Japan, the EU, the USA & Southeast Asia**, identifying three high-potential growth markets for deployment.
- Developed a **Python-based interactive gas map (JSON & Pandas)**, optimizing regional energy feasibility analysis.
- Modeled **lifecycle emissions & financial feasibility** for natural gas, hydrogen & biogas as SOFC fuels.
- Led a **Beer Waste-to-power project** in a Japanese brewery using Bosch's SOFC product, identifying the potential to generate **572 kW of power** & reduce **thousands of metric tons of CO<sub>2</sub>** annually.

**Medco Power Indonesia** | *Renewable Energy Engineer Intern* Jakarta, Indonesia | **03.2023 – 04.2023**

- Investigated the global electrolyzer market for a **solar-hydrogen hybrid power plant** proposal in Indonesia.
- Analyzed Power Purchase Agreements with governmental stakeholders to identify **PV optimization** opportunities.
- Conducted feasibility studies on **Bifacial PV systems** to increase solar absorption for a **utility-scale PV plant**.
- Achieved a **25% increase** in cost efficiency by redesigning the plant of a multi-million dollar PV project.

**MFTBC – Daimler Trucks Asia** | *Quality Management Intern* Kanagawa, Japan | **02.2022 – 08.2022**

- Implemented **SQL-based employee survey analytics**, identifying improvement points and actionable solutions.
- Led and designed the creation of the "Seat Booking System", **automating pandemic-period office management**.
- Received a **certificate of recognition** from the head of the department for digital transformation contributions.

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## KEY SKILLS AND INTERESTS


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Languages	Tools	Interpersonal	Hobbies
Indonesian (Native)	Microsoft Office Suite	Experienced project manager	Travelling (Visited 22 countries, lived in 5)
English (IELTS 8.0 / C1)	Python, SQL, R	Proactive team player	Football Enthusiast
German (B2)	Tableau, Power BI, Jira	Resilient, and punctual	Cinematography
Japanese (Intermediate/N3)	HOMER, MATLAB, Simulink	Creative and detail-oriented	Bouldering
French (A2)	OpenModelica	Global-minded collaborator	

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## PROJECTS

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**Geothermal Potential Analysis in Taiwan**  | *University of Lorraine* *Nancy, France* | **10.2024 – 02.2025**

- Modeled Single-Flash and Binary Rankine Cycle geothermal plants in Python (CoolProp) for Taiwan’s Datun region.
- Estimated **197 GWh/year** (Single-Flash) and **74.6 GWh/year** (Binary) generation potential, offsetting **255,000+ tons CO<sub>2</sub>** annually, equivalent to removing **55,400 passenger cars** off the road per year.

**Bachelor’s Thesis**  | *Sophia University* *Tokyo, Japan* | **10.2023 – 07.2024**

- Thesis’s title: **Implementation of Renewables-based Power-to-Hydrogen-to-Power (P2H2P) System for Tropical Remote Island Stand-Alone Microgrids: A Techno-economic Comparative Analysis**
  - Optimized P2H2P system sizing with **Homer Pro**, achieving **\$0.236/kWh electricity cost**, lower than diesel and battery-based alternatives.
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## VOLUNTEERING & LEADERSHIP

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**President of the Indonesia Division at SEAS** | *Sophia University* *Tokyo, Japan* | **10.2021 – 08.2024**

- Led a team of 20 at The Southeast Asian Society at Sophia (SEAS), a multi-university organization that empowers Southeast Asians in Japan in organizing and ideating workshops, exhibitions, and multicultural sharing sessions.

**Volunteer at Sophia Refugee Support Group (SRSg)** | *Sophia University* *Tokyo, Japan* | **08.2023 – 07.2024**

- Helping refugees in Japan acclimate to Japanese society by holding monthly gatherings, providing food, a safe space, cultural exchange, and Japanese learning opportunities.