Lucas **Pereira**

DATA SCIENTIST ENGINEER · IMPLEMENTING DATA SOLUTIONS FOR CLIMATE & ENERGY

Paris

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Summary

Data Scientist Engineer with a strong background in **modeling**, **analytics**, and **decision-support tools** for the energy sector. Experienced in designing **end-to-end data solutions**, from forecasting and simulation to deployment and automation. Proven track record in translating complex systems into actionable insights for **market design** and **energy planning**. Motivated by impactful challenges at the intersection of data, systems, and sustainability, especially in **ClimateTech** and **FinTech**.

Education

Ecole des Mines de Paris (Mines ParisTech)
Paris, 5th arrondissement

CIVIL ENGINEER
Sept. 2020 - Mar. 2022

- Specialization in Geostatistics and Applied Probabilities

Ecole supérieure de physique et chimie industrielles de Paris (ESPCI Paris)
Paris, 5th arrondissement

ENGINEERING - PHYSICS TRACK
Sept. 2017 - Sept. 2020

- Multidisciplinary scientific foundation: mathematics, physics, chemistry, and biology. Major in Biophysics.

Lycée Hoche
Versailles

PREPARATORY CLASSES FOR ENGINEERING SCHOOLS - PHYSICS & CHEMISTRY TRACK
Sept. 2015 - Aug. 2017

- Multidisciplinary scientific training: mathematics, physics, and chemistry. Preparation for competitive engineering school entrance exams.

Experience

Artelys
Paris

CONSULTANT - DATA SCIENCE
May 2023 - Present

- Developed and maintained operational solutions (dashboards, APIs, web applications) supporting data science models, using **Python**, **R**, **FastAPI**, and **Plotly**.
- Applied machine learning and statistical techniques in the energy sector: **time series forecasting**, **clustering**, and **climate-adjusted modeling** for energy demand and production.
- Designed and deployed microservices and applications using **Docker**, **CI/CD pipelines** (GitHub Actions, GitLab CI), and **AWS S3** or **PostgreSQL** for data storage and access.
- Implemented **workflow orchestration** through API-driven coordination and **SLURM** job scheduling on HPC clusters; integrated **RabbitMQ** for asynchronous task handling.
- Delivered hands-on **R** training sessions, from programming fundamentals to deploying dashboards for electricity consumption and production data analysis.

Réseau Transport d'Électricité (RTE)
Paris, La Défense

ENERGY MARKET MODELING ENGINEER
Mar. 2022 – Mar. 2023

- Modeled **investment decisions** and strategic behaviors of market participants in electricity and **capacity markets**, contributing to long-term market scenario planning.
- Developed a modular simulation tool in **R** to model investment strategies, integrated as an extension of the **Antares Simulator** for European power system analysis.

Réseau Transport d'Électricité (RTE)
Paris, La Défense

INTERN – NETWORK MODELING ENGINEER
Sept. 2021 – Mar. 2022

- Performed prospective techno-economic studies assessing the value of **stationary storage (batteries)** for congestion management in the 2050 power grid.
- Modeled and evaluated regional grid investment scenarios incorporating storage technologies.
- Developed and maintained a **Python**-based heuristic model to simulate network investments and battery operation under future grid conditions.

International Energy Agency (IEA)
Paris, 15th arrondissement

INTERN – MODELING ENGINEER
Mar. 2021 – Sept. 2021

- Built a **Python** model using **deep learning (MLPs)** to disaggregate national electricity demand by end-use sector across multiple countries.
- Conducted quantitative energy economics analysis and contributed to the **World Energy Outlook 2021**, particularly within the demand-side modeling chapter.

Languages & IT Skills

Programming	**#Python**, **#R** (expert level, package development, modeling, data science, visualization, optimization, deep learning, APIs), **#SQL**
Software	**#Docker** (Containerization and microservices development), **#PostgreSQL** (database), **#Slurm**(HPC workload manager), **#RabbitMQ** (message broker)
Languages	**English** fluent, **Spanish** fluent