

Aitor Diez Mateo

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Final-year Computer Engineering and Data Science & AI student with applied machine learning experience spanning academic energy-systems research and industry data science.

Education

University of Deusto

Dual B.Sc. in Computer Engineering and Data Science & Artificial Intelligence

Bilbao, Spain

Sept 2022 – June 2027

Average grade: **9.30/10**

Highest Honors in ~40% of courses:

2026: NLP, Reinforcement Learning, Web Engineering, Operating Systems, Advanced Machine Learning, Knowledge Management, Software Design

2025: Information Advanced Modelling, Big Data Processing (PySpark), Deep Learning (PyTorch)

2024: Databases (SQL), Application Programming (Java), Programming Methodology & Languages, Data Science (R), Advanced Statistics, Low-Level Programming (C/C++)

2023: Calculus, Computer Structure

Wilfrid Laurier University

Academic Exchange Program

Waterloo, ON, Canada

Sept 2026 – Dec 2026

Experience

McKinsey & Company — QuantumBlack

Data Scientist Intern

Madrid, Spain

June 2026 – July 2026

- Built an end-to-end GenAI pipeline that automatically extracts customer intents and interaction patterns from call-center transcriptions, powering data-driven analytics for agent training and coaching programs at scale.

DeustoTech — Deusto Sustainable Research Group

Machine Learning Research Intern

Bilbao, Spain

Feb 2025 – June 2026

- Co-authored three research outputs on data science applied to building energy systems, under the supervision of Dr. Roberto Garay-Martinez (*see Publications*).
- Built a hybrid short-term load forecasting framework (K-Means clustering, SVM classification, regression) that decouples daily load shape from peak magnitude, achieving $R^2 = 0.83$ and a 26% improvement in explained variance over the strongest baseline, across ARIMAX, Prophet, and zero-shot foundation models (TimesFM, Chronos).
- Designed a rule-based Algorithmic Thresholding and Baseline Detection (ATBD) method to identify residential EV charging events from aggregate household consumption, without sub-metering or private user data.
- Developed a heat-pump demand-side management algorithm driven by Spanish wholesale electricity prices, reducing daily peak loads by up to 60% and annual energy costs by 2.5% on a real multi-rise building dataset.

Publications

A. Diez Mateo, R. Garay-Martinez, C.E. Borges, A. García Garre. “Hybrid Machine Learning Approach for Short-Term Load Forecasting in Small Commercial Buildings.” *ITISE 2026* (Engineering Proceedings, MDPI).

A. Diez Mateo, M. Perrin, R. Garay-Martinez, J.I. García Quintanilla. “Algorithmic Thresholding and Baseline Detection for Residential EV Charging Event Identification.” *Splitech 2026*

A. Diez Mateo, R. Garay-Martinez, J.I. García Quintanilla. “Structured Analysis of Heat Pump Usage in Buildings and Load Optimization for Optimal Management of Loads.” *Splitech 2026*

Achievements

IBM OA6 University Challenge 2026

June 2026

National Finalist in the IBM Entrepreneurship, Innovation, and Consulting challenge, having advanced from the University of Deusto stage to architect *Repsol Apex*— a contextual Agentic AI solution driving enterprise-wide transformation under the months-long direct mentorship of IBM Consulting and Repsol’s Head of Data & AI.

Ikasiker Research Fellowship — Basque Government

Jan 2026 — June 2026

Department of Education | DeustoTech - Instituto Tecnológico Deusto

Awarded a competitive research grant for academic excellence, ranking 1st in the Faculty of Engineering and 2nd university-wide.

Skills & Interests

Technical: High proficiency in Python (incl. ML frameworks & libraries); intermediate in R, Java & C/C++.

Languages: Spanish (native), English (advanced — CAE C1, 2021), Basque (intermediate — B2, 2022)

Certifications:

- Applied Data Science with Python — IBM
- Data Analysis with Python — IBM
- Data Visualization with Python — IBM
- Python for Data Science — IBM
- Academy Accreditation: Generative AI Fundamentals — Databricks
- Academy Accreditation: AI Agent Fundamentals — Databricks
- Introduction to LangChain — LangChain