Iñaki Madinabeitia

AI Engineer

- 🏠 Málaga, Spain.
- 📍 Open to relocate.
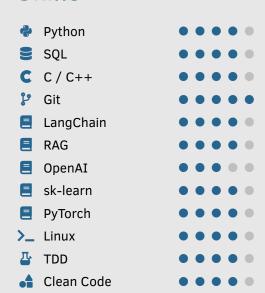- ✉ inakimadi@gmail.com
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Strengths ───────

Public speaking   Analytic reasoning

Teamwork   Communication skills

Problem-solving Advanced skills

Skills ───────

🐍 Python	● ● ● ● ○	
🗄 SQL	● ● ● ● ○	
C C / C++	● ● ● ● ○	
Git	● ● ● ● ●	
LangChain	● ● ● ● ○	
RAG	● ● ● ● ○	
OpenAI	● ● ● ○ ○	
sk-learn	● ● ● ● ○	
PyTorch	● ● ● ● ○	
Linux	● ● ● ● ○	
TDD	● ● ● ● ○	
Clean Code	● ● ● ● ○	

Languages ───────

🇪🇸 Spanish: Native.

🇬🇧 English: Native.

About me

Computer Scientist and Mathematician specialized in AI and Machine Learning. My experience in teaching University classes gave me a more solid foundation of skills that I apply to software programming. I am passionate about LLMs and research, professional, and willing to learn how to design, develop, and implement AI solutions that integrate into clients' customer support systems.

Working Experience

2021 – 2025   **University Instructor - ENG, BESS programs.**
University instructor for US students at *International Education of Students Abroad* linked with *University Carlos III of Madrid (UC3M)*, demonstrated full command of English. Courses taught:

Artificial Intelligence   Machine learning fundamentals, neural networks and deep learning (CNNs, RNNs, Transformers), with hands-on labs implementing solutions in Python and PyTorch.

Statistics & Probability Theory   Statistics and probability techniques for data analysis, prediction model, hypothesis testing and Bayesian inference (prior/posterior distributions for ML systems), focused on economics processes.

Game Theory   Applications to multi-agent systems and AI, adversarial machine learning (Nash equilibria, Minimax Theorem) and competition/cooperation (Zero and General sum games) in ML agents.

Linear Algebra   Applied to dimensionality reduction/PCA (vector spaces and basis transformations), relevant for NLP embeddings (eigenvalues/eigenvectors), matrix operations and solving linear systems.

Education

2021 – 2023	**M.Sc. Advanced Mathematics.** Interpolation, cryptography, hypothesis testing, mathematic models, stochastic processes.	UMA
2014 – 2019	**B.Sc. Computer Science.** AI - ML Specialized. Computing and Intelligent Systems (AI, ML, Neural Networks, Computer Vision).	UGR
2014 – 2019	**B.Sc. Mathematics.**	UGR

Side projects

Feature Selection - Mix of *Mutual Information* and *Delta Test*.
In Python. *mRMR MI*, *Filter* algorithms. Comparison of success rate of MI, DT and proposed MI-DT for 1 through 6 variables. *Ref: github.com/InakiMadi/Feature-Selection-Mixing-Mutual-Information-And-Delta-Test*.

Sudoku solver.
In Wolfram Mathematica using group theory.
Ref: github.com/InakiMadi/Sudoku_solver.

Research on Open Problems in Combinatorial Geometry.
Research into latest developments. Attempts to improve bounds on Polyominoes and Hadwiger-Nelson. *Ref: github.com/InakiMadi/Open-problems-in-Combinatorial-Geometry*.

Extra-Curricular Activities

Lead events host.   In-person and online charity events for a community of $\sim$100 people.