Jose Javier Fernández González

M.Sc. Quantum Science and Technology | Engineering Physicist

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Professional Summary

Engineering Physicist specialized in Quantum Computing, High-Performance Computing, and Data Science. Currently pursuing an M.Sc. in Quantum Science and Technology at the University of Barcelona. Experienced in software development, applied cryptography, and algorithmic optimization within industrial R&D environments. Motivated to create efficient, scalable, and reliable computational solutions.

Technical Focus

Quantum Computing HPC Data Science and Statistics Applied Physics

Professional Experience

2024–2025 **Data Scientist Student Worker**, *Intel Corporation*, Heredia, Costa Rica
Developed and maintained automated data analysis tools in Python and Flask to process internal engineering data, reducing debug time and improving team efficiency across multiple business units. Collaborated with cross-functional teams in the Tech Leadership Office.

2024–Present **Founder & Coordinator**, *Quantum Learning Wave*, Cartago, Costa Rica
Founded an independent educational initiative focused on quantum computing and engineering physics. Designed workshops and open-source educational materials used by students from Costa Rica.

2023–2024 **Intern, Physical Dimensional Metrology Department**, *Costa Rican Metrology Laboratory*, San José, Costa Rica
Led the development of an automated measurement system for gauge blocks using Python and serial communication. Implemented GUI and device control modules that improved precision and significantly reduced manual operation time.

Education

2025–2026 **M.Sc. Quantum Science and Technology**, *University of Barcelona*, Spain
Focus on quantum computation, quantum information theory, algorithms, and experimental techniques.

2020–2025 **B.Sc. Engineering Physics**, *Technological Institute of Costa Rica*, Costa Rica, Honorary Mention | Vice President, Student Association
Thesis: Performance Characterization of Post-Quantum Encryption Algorithms.

Technical Skills

Programming	Python, Git, Qiskit, Cirq, MATLAB, R, COMSOL, SolidWorks, AutoCAD, Microsoft Excel VBA
Computing	High-Performance Computing (HPC), Linux Systems, Bash, Cluster Management, Cloud Environments
Data Science	Data Cleaning, Statistical Modeling, Data Visualization, Machine Learning Fundamentals
Engineering & Physics	Quantum Mechanics, Metrology, Simulation, Instrumentation, Numerical Methods

Certifications

2023–2024 **Qubit by Qubit Program**, The Coding School, California — Full scholarship; final project selected by experts from Google Quantum AI, NASA QuAIL, and NIST.

2023–2024 **High Performance Computing School & Kabré Workshop**, CeNAT.

2023 **Advanced Analytics with Python**, Grow Up Data Analytics.

Leadership & Volunteering

Technical Project Management Intern — IBM Qiskit Fall Fest (EnLuz).

Instructor — Python, Linux and LaTeX workshops for university students.

Volunteer — ASVO (Protected Areas) and Legatos Mundi NGO.

Awards

2020–2025 Academic Excellence Scholarship (full program).

Sports Bronze Medal – Central American Fencing Championship.

Languages

Spanish Native

English Advanced (C1)

German Intermediate (B1)

Personal Interests

Philosophy, Film, Literature, Fencing.