SARA SALES MERINO

PHYSICS STUDENT

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SUMMARY

Final-year Physics student with a strong academic background in theoretical and computational physics. I'm particularly interested in the intersection of quantum mechanics and computation, including emerging areas such as quantum information and quantum computing. While still defining my specific research path, I am eager to explore opportunities that combine physics and programming, especially for my final degree project.

EDUCATION

BACHELOR OF PHYSICS Universitat Autònoma de Barcelona   📅 2021 – 2026

- Distinction in Mechanics and Relativity, Electricity and Magnetism, Algebra, Mechanics Laboratory, and Numerical Methods.
- Excellence in Computational Physics, Electromagnetism, Structure of Matter and Thermodynamics, External Practicum, and Optics Laboratory.

EXCHANGE PROGRAM AT UNIVERSITY OF CALIFORNIA, BERKELEY (UPCOMING) University of California, Berkeley   📅 August 2025 – December 2025

- Selected for an exchange program as part of my degree studies.
- Will participate in advanced coursework and research in theoretical and experimental physics.

ARTS BACCALAUREATE Arts and Design School Massana   📅 2016 – 2018

ADDITIONAL EDUCATION & CERTIFICATIONS

CSIC JAE INTRO ICU SCHOLARSHIP (ON-GOING) Institut de Ciències de Materials de Barcelona (ICMAB)   📅 2024 – 2025

- Research introduction scholarship from the CSIC (Supreme Council for Scientific Research).
- Working on the project *Quantum Field Theory for Non-equilibrium Many-body Problems*.
- Learning and applying advanced concepts in quantum field theory, including Green's functions and Matsubara formalism.

BE AN ICFONIAN FOR A DAY Institut de Ciències Fotòniques (ICFO)   📅 2024 – 2025

- Selected for a year-long program for women in STEM undergraduate and master's programs.
- Engaging with ICFO researchers, experiencing their daily work life, and building a professional network.
- The program aims to inspire and guide participants in their academic and professional careers.

IFIC SUMMER STUDENT PROGRAMME Institut de Física Corpuscular (IFIC)   📅 2024

- Attended conferences and lab visits focused on particle, nuclear, and medical physics.
- Collaborated with a Medical Physics research group on convolutional neural networks for image diagnostics.
- Acquired skills in Python, deep learning, PyTorch, AI, and convolutional neural networks.

INTRODUCTION TO PROGRAMMING Udacity   📅 2020

- Covered HTML, CSS, JavaScript, Python, and Git/GitHub.

SKILLS & LANGUAGES

- **Python:** ● ● ● ● ○
- **C:** ● ● ● ● ○
- **LaTeX:** ● ● ● ● ●
- **Adobe Package:** ● ● ● ● ○
- **Office Package:** ● ● ● ● ●
- **Git & GitHub:** ● ● ● ● ○
- **R:** ● ● ○ ○ ○

- **Spanish:** Native
- **Catalan:** Native
- **English:** Fluent