

Laia Coronas Sala

Machine Learning · Biomedical Engineering · Clinical Translation

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Biomedical engineer and data scientist with experience across clinical AI, medical imaging, biomedical NLP, physiological signal analysis and early-stage medical technology. Published researcher and Fulbright Scholar trained at UC Berkeley–UCSF.

EXPERIENCE

- 2026–present **R&D; Engineer**
[Theranova / Respirex](#) · [San Francisco Bay Area](#)
- Physiological signal analysis; benchtop testing; usability research; clinical-study and design-documentation support for medical technologies.
- 2023–2026 **Machine Learning Engineer & Researcher**
[Lighthouse Disruptive Innovation Group](#) · [Boston / Remote](#)
- Quantum molecular modeling + ML; peer-reviewed publications; reusable scientific datasets and code.
- 2023–2024 **Research Intern — Computational Radiomics**
[Vall d'Hebron Institute of Oncology](#) · [Barcelona](#)
- CT radiomics and ML for immunotherapy-response prediction; model validation and explainability.

EDUCATION

- 2025–2026 **Master of Translational Medicine**
[UC Berkeley–UCSF](#) · [California](#)
Fulbright Scholar.
- 2024–2026 **MSc Health Data Science**
[URV / UPC / UAB / UB](#) · [Spain](#)
Thesis: NLP for dementia detection.
- 2019–2024 **BSc Biomedical Sciences + BSc Biomedical Engineering**
[University of Barcelona](#) · [Spain](#)

SELECTED RESEARCH

- 2026 **Dementia NLP**
[Master thesis](#) ·
Handcrafted linguistic features, TF-IDF, embeddings and transformer representations; external validation and SHAP/UMAP interpretability.
- 2025 **Quantum molecular science**
[Published research](#) ·
QMProt dataset + fragmentation/resource-estimation methods for scaling quantum simulation toward larger proteins.

PUBLICATIONS

- **QMProt: A Comprehensive Dataset of Quantum Properties for Proteins.** Electronics (2025).
- **A Quantum Strategy for the Simulation of Large Proteins.** Electronics (2025).
- **Efficient Protein Ground State Energy Computation via Fragmentation and Reassembly.** arXiv (2025).

TECHNICAL

ML/Data: Python · scikit-learn · PyTorch/transformers · XGBoost · SHAP · medical imaging/radiomics · NLP · physiological signals · statistics

Engineering: MATLAB · SolidWorks · Arduino · sensors · benchtop testing · experimental design