Pere Lopez Gutierrez

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PROFILE

Applied AI/ML engineer with hands-on experience **owning deep learning projects end-to-end**, from problem framing and model design to deployment and validation, in fast-paced, cross-functional, ambiguous environments. Strong **Python** and **deep learning** background (**PyTorch**, **TensorFlow/Keras**), solid statistical and mathematical foundation from a Physics degree, prior **BI/data analytics** experience in a **banking environment** (CaixaBank), and a track record of taking AI products from prototype to **real-world deployment** across international teams and institutions.

SKILLS

Languages & Tools: Python, SQL, PyTorch, TensorFlow/Keras, scikit-learn, Git, Docker, Bash

ML/AI: Deep learning, computer vision, multimodal & self-supervised learning, model deployment, statistical analysis, experiment design, data pipelines, medical imaging

EXPERIENCE

Vall d'Hebron Research Institute & Universitat Autònoma de Barcelona *Oct. 2023 – Present*
PhD Researcher / Applied AI Engineer — Medicine AI

Barcelona, Spain · incl. visiting research at KU Leuven (2026) and University of Edinburgh (2025)

- **Own the full lifecycle** of multiple deep learning products for cardiovascular diagnostics — from problem definition and data pipelines to **model development, validation, and deployment** in clinical workflows.
- **Collaborate closely with clinicians, engineers, and multidisciplinary teams** across 10+ hospitals and universities worldwide (incl. KU Leuven, University of Edinburgh, AUMC, UST Hong Kong), translating research into deployable tools and setting **project goals, success metrics, and roadmaps** under ambiguous, fast-paced conditions.
- Co-authored **10+ peer-reviewed publications** and conference presentations (ESC, EuroEcho, EACVI), communicating results to technical and clinical audiences.

SDG Group — Client: CaixaBank *Feb. 2021 – Oct. 2023*
BI & Data Analyst

Barcelona, Spain

- **BI and Data Analyst** embedded in a **banking environment** (CaixaBank), building **data pipelines**, **SQL**-based analytics, and reporting solutions, translating ambiguous business requirements into production-ready data products.

EDUCATION

Universitat Autònoma de Barcelona — Ph.D. Candidate in Medicine AI *Sep. 2024 – Present*

Universitat Pompeu Fabra — MSc, Computational Biomedical Eng. *Sep. 2022 – Jul. 2023*

Universitat de Barcelona — BSc in Physics *Sep. 2015 – Jan. 2020*

SELECTED PUBLICATIONS

- **Lopez-Gutierrez, P.** et al. *Artificial intelligence for aortic valve calcium score quantification by echocardiography.* medRxiv preprint, 2025.
- Morales-Galán, A., **Lopez-Gutierrez, P.** et al. *Automatic left-ventricular view detection and ejection fraction assessment.* EuroEcho 2024 / ESC 2025.
- 10+ additional peer-reviewed articles and abstracts in applied AI and cardiovascular imaging — full list at perolope.github.io.