Pablo Blasco Fernandez

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Education

MSc Biomedical Engineering - ETH Zurich   Sept 2022 – May 2024

- Major in Bioimaging. Relevant coursework: Biomedical Imaging, Neuroinformatics, Image Analysis and Computer Vision, Methods & Models for fMRI Data Analysis
  45 ECTs (50% extra workload) completed in a semester with GPA of 88%
- Selected as SEMP Scholar twice for research stays at Harvard University

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BSc Biomedical Engineering (ranked top 2%) - Carlos III University   Sept 2018 – July 2022

- Semester exchange in Nanyang Technological University of Singapore (KA107 Scholarship - fully covered)
  Relevant coursework: Bioimaging, Case studies in bio-pharma-energy, 3D Printing
- Honours in: Electromagnetism, Material Science and Engineering, Linear Algebra, Information Skills, Writing and Communication Skills, Robotics and Bioethics. Students delegate in year 2021/2022
  Final BSc Thesis: Association between cerebral perfusion and subclinical cardiovascular disease in middle age: processing and analysis of te-pCASL MRI (Honours)
- Extracurricular courses: Introduction to Artificial Intelligence, Management and leadership & Collaborative teamwork

Experience

Graduate Researcher - Harvard University & BWH (Boston, MA, USA)   Sept 2024 – Present

- Working on CT segmentation and 3D reconstruction (CNNs, GANs and GNNs) of aortic valves to create patient-specific digital twins, supporting precision in medical simulations and personalized treatment planning under the supervision of Farhad R. Nezami

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Data Scientist Intern - Liom AG (Pffafikon, Switzerland)   March 2024 – Oct 2024

- Enhanced KPIs by 25%, optimizing glucose estimation accuracy by using Raman Spectroscopy
- Implemented an outlier detection and mitigation strategy for live measurement campaigns based on Mahalanobis distance for out-of-distribution samples
- Conducted exploratory data analysis on glucose measurement campaigns to derive key insights

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Graduate Researcher - Harvard University & MGH (Boston, MA, USA)   Sept 2023 – July 2024

- Developed a model and generated augmentation strategies for automatic cortical and white matter parcellations using 3D-to-2D projections under the supervision of Juan Eugenio Iglesias in the LEMoN group at the Athinoula A. Martinos Center for Biomedical Imaging

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Graduate Researcher - ETH Zurich Computer Vision Lab (Zurich, Switzerland)   Sept 2023 – July 2024

- Semester Project in the Biomedical Image Computing group supervised by Ender Konukoglu, exploring the capabilities and assessing performance of training-free neural network architectures applied to medical images

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Undergraduate Researcher - Spanish National Center for Cardiovascular Research   June 2021 – July 2022
(Madrid, Spain)

- Development and optimization of scripts and pipelines in MATLAB and bash for processing and analysing MRI and PET brain images with different radiotracers (fluorodeoxyglucose and amyloid) of subjects from the Progression of Early Subclinical Atherosclerosis (PESA) population study, led by Dr. Valentín Fuster with the group of Marta Cortés Canteli

Publications

Pseudo-rendering for Resolution and Topology-Invariant Cortical Parcellation October 2024

Pablo Blasco Fernandez, Karthik Gopinath, John Williams-Ramirez, Rogeny Herisse, Lucas Deden-Binder, Dina Zemlyanker, Theressa Connors, Liana Kozanno, Derek Oakley, Bradley Hyman, Sean Young, Juan Iglesias

International Workshop on Machine Learning in Medical Imaging (MLMI) (2024) - Endorsed by MICCAI 2024 Conference

Institutional Responsibilities and Service

AI4MED - Corporate Relations Team Lead Nov 2023 - Present
- Bringing knowledge about current and future AI technologies to medical students and clinicians. Fostering connections between sponsoring companies for scientific outreach events

BEST UC3M - Corporate Relations Department Staff Member Sept 2020 - Sept 2022
- Forging connections between academia and industry, driving impactful collaborations to enhance students' professional careers. Helped in organizing and managing 2 international events with European students

TEDxUC3M - Speakers Coordinator (Board of Directors) Sept 2020 - Sept 2022
- Spearheaded strategic decisions in collaboration with the board to enhance the overall TEDx experience for both speakers and attendees. Coordinated with cross-functional teams to ensure seamless execution of event logistics, including speaker preparation, stage setup, and audience engagement. Advocated for inclusivity and diversity in speaker selection, contributing to a multifaceted range of perspectives and ideas

Isabel la Catolica School - Volunteering Teaching Assistant Sept 2015 - May 2017
- Volunteer Teacher at PROA (Reinforcement, Guidance, and Support Program) promoted by the Spanish Ministry of Education, dedicated to assisting 5th and 6th-grade elementary students from low-income backgrounds or social exclusion situations, who face challenges with academic performance during the school year.

Awards and Honors

Awarded - **Nova 111 List (Spain)** - Nationwide Ranking Top 10 Engineering Students	2024
Awarded - **'la Caixa' Fellowship (Spain & Portugal)** - Full tuition and stipend for any university worldwide	2022
Gold Medal - **EIT Health Innovation-Days (Spain)** - Best health startup proposal	2021
Bronze Medal - **EIT Health Innovation-Days (Europe)** - Best affordable health solution	2021
Bronze Medal - **Engineering Medicine (Madrid)** - Top 3 case study solutions	2021

Skills and Languages

Languages: Spanish (Native), English (C2), German (A2), French (A1)

Technologies: Python (NumPy, Pandas, Matplotlib, Seaborn, OpenCV, scikit-learn, PyTorch, Lightning, Weights & Biases), R (RStudio), MATLAB, Blender, git