

EDUCATION

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- **Massachusetts Institute of Technology (MIT)** Cambridge, United States
PhD Student - AI and Computer Vision for decision-making advised by Prof. Antonio Torralba September 2022 - Current
 - **Universitat Politècnica de Catalunya (UPC)** Barcelona, Spain
Bachelor in Mathematics; 9.53/10 (rank 3) 2017 - 2022
 - **Universitat Politècnica de Catalunya (UPC)** Barcelona, Spain
Bachelor in Data Science and Engineering; 9.58/10 (rank 1) 2017 - 2022
 - Degrees done concurrently as part of the CFIS-UPC (Centre de Formació Interdisciplinaria Superior) program.
 - **American School of Barcelona** Barcelona, Spain
International Baccalaureate (IB); 9.1/10 (41/45 points in the IB scale) 2015 - 2017

SELECTED PUBLICATIONS

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- **Ambient Diffusion Omni: Training Good Models with Bad Data** Neurips 2025 (Spotlight ★)
ARM, GD*, AK, AT, CD*
 - **Separating Knowledge and Perception with Procedural Data** ICML 2025
Adrián Rodríguez-Muñoz, Manel Baradad, Phillip Isola, Antonio Torralba
 - **A Vision Check-up for Language Models** CVPR 2024 (Spotlight ★)
PS, TRS*, MB, SF, ARM, SD, PI, AT*

WORK EXPERIENCE

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- **Research Scientist Intern at Amazon** Barcelona, Spain
Research in the NAS Discovery Technologies Team May 2025-Sep 2025
 - **Quantitative Trading Intern at Susquehanna International Group** Dublin, Ireland
Trading intern in the peripheral index options desk June 2022-Aug 2022
 - **Research Intern at Aspect Capital** London, England
Development of Systematic Macro Relative Value investment strategies June 2021-Aug 2021
 - **Collaborating Student at ZeClinics** Barcelona, Spain
Development of specialized deep learning pipeline for zebrafish segmentation. January 2021-June 2021
 - **Co-founder and researcher at Vixnio Technologies** Barcelona, Spain
Development and backtesting of Deep Learning models for quantitative trading June 2020-May 2021
 - **Research Student at Barcelona Supercomputing Center** Barcelona, Spain
Using recurrent neural nets (LSTM+AdaptiveLogSoftmax) for synthetic memory trace generation July 2019-Sept 2019

AWARDS

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- **Aily Labs Best Academic Record Award:** Prize given to the top academic record in the Data Science and Engineering major, funded by Aily Labs
 - **Esperanto Technologies Best Academic Record Award:** Prize given to the top three ex-aequo academic records in the CFIS-UPC program, funded by Esperanto Technologies
 - **La Caixa Fellow 2022:** Awarded full tuition + stipend scholarship to pursue PhD studies in the US by the La Caixa foundation given to only 100 students in Spain every year.
 - **Aspect Capital + Imperial College Algothon 2021:** 1st place at the 2021 Algothon, organized by the Imperial College Algorithmic Trading Society and Aspect Capital
 - **2021 Spain G-Research Quant-Trading Challenge.:** 1st place at the 2021 Spain G-Research Quant-Trading Challenge
 - **HackUPC2019:** 2nd place at the McKinsey Challenge at the HackUPC2019 hackathon
 - **CFIS double scholarship:** Academic-based full scholarship given to around 6 freshmen every year at UPC
 - **Mathematics Olympiad:** Bronze medal at the 2017 Spanish Mathematical Olympiad

TECHNICAL SKILLS

- Computer Vision and Image Processing with the PyTorch Python library
- Data processing and Machine Learning with Numpy, Pandas, and Scikit Python libraries
- Algorithms and Data Structures in C++
- Numerical processing with Matlab
- Data processing with Excel
- Distributed cluster computing with SLURM (e.g. multi-node distributed training)
- Scientific reviewing (TMLR, TPAMI, ECCV FoMo)
- Data analysis with the R Statistical Computing Language: Familiarity with the R language and the R Studio environment, and its application to basic data processing, lm, glm, PCA, CA, and others.

NON-TECHNICAL SKILLS

- English: Proficiency level (Michigan Test C2) and 118/120 on the TOEFL. Extensive experience in written and oral communication: 7 years of schooling at the American School of Barcelona, high school during 1 year in Los Altos, California, and 2 years as a PhD student at MIT.
- Strong analytical skills and creative and rigorous thinking: Ability to think creatively and rigorously when solving problems; trained by proving many mathematical theorems and propositions.
- Spanish and Catalan: Native level in speaking and writing.