

Matilde Dolfato

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EDUCATION

Bocconi University, Milan, Italy	
M.Sc. Artificial Intelligence	Sep 2024–Present
· Courses: Linear Algebra, Algorithms for Opt and Inference, Software Eng, Deep and Reinforcement Learning, Computer Vision, Infomation Thoery, Real and Fourier Analysis (audit)	
B.Sc. Economic and Social Sciences	2021–2024
· Advisor: Prof. Jérôme Adda	
· Final work: <i>Can Machine Learning Aid Econometrics?</i>	
Universitat Pompeu Fabra, Barcelona, Spain	
Exchange Program	2024
Università degli Studi di Milano Statale	
B.Sc. Biotechnology, Single Courses	2022–2023

EXPERIENCE

Research fellow	Nov 2025–Present
NOVA Information Management School, Lisbon	
· Supervisor: Prof. Mauro Castelli	
· Research area: explaining <i>double descent</i> phenomenon, what underlies stochastic gradient descent preference for smoothness, what is smoothness	
Visiting Student	Apr 2025–Nov 2025
Bocconi Institute for Data Science and Analytics (BIDSA)	
· Mentor: Prof. Elia Brué	
· Research area: Ricci curvature bounds for discrete spaces, optimal transport, convergence of diffusion processes and functional inequalities in spectral theory	
· Technical notes and two presentations (1 , 2)	
Founding and Board Member	Sep 2025–Present
Bocconi Student Association for Mathematical Sciences	
· Gave a lecture on optimal transport	
Reading Seminars Information Geometry (Technical notes)	Spring 2025
Research Internship Algebraic Topology	Spring 2025
Department of Decision Sciences, Bocconi	
Research Assistant	Jun 2023–Dec 2023
Innocenzo Gasparini Institute for Economic Research, Bocconi	
· Mentor: Prof. Massimo Marinacci	
· Research area: re-interpretation and adaptation of the first quantitative analysis in social sciences by Cesare Beccaria (with tools of probability and decision theory)	

SELECTED PROJECTS

- [saLM-1: Self-Aware Language Model Ensemble](#) (LLM ensemble architecture)
- [Adversarial Robustness Pipeline](#) (CNN adversarial training)
- [Wordle Guesser](#) (Entropy-based guesser)
- [Movie Recommendation System](#) (Web app)

SKILLS

- Programming: Python (proficient), R, STATA (advanced), C, C++ (beginner)
- Languages: Italian (native), English (proficient), Spanish (advanced)

OTHER INTERESTS

- Sailing, surfing, windsurfing; volleyball (ex-professional); mountain hiking and skiing; piano; theater and cinema