

# Matilde Dolfato

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EDUCATION	Bocconi University, Milan, Italy	
	M.Sc. Artificial Intelligence	2024 - Present
	· Main Courses: Advanced Linear Algebra, Algorithms, DL and RL, Information Theory, Computer Vision, NLP, Complex Systems, Real and Fourier Analysis (audit)	
	· PhD Courses: Real Analysis II (Optimal Transport), Probability Theory II, Theory of Computation (audit)	
	B.Sc. Economic and Social Sciences	2021 - 2024
	· Advised by Prof. Jérôme Adda, final work: “ <a href="#">Can Machine Learning Aid Econometrics?</a> ”	
	· Final grade: 110/110 cum laude	
	Universitat Pompeu Fabra, Barcelona, Spain	
	Exchange Program	2024
	Università degli Studi di Milano Statale	
	B.Sc. Biotechnology	2022-2023
	· Single courses: General Biology, Genetics	
EXPERIENCE	NOVA IMS, Universidade NOVA de Lisboa, Portugal	
	Visiting Student	Nov 2025 - Present
	· Visiting Prof. Mauro Castelli	
	· Research area: explaining double descent phenomenon, what underlies gradient descent preference for smoothness, what is smoothness	
	Bocconi Institute for Data Science and Analytics	
	Visiting Students Initiative	Apr 2025 - Present
	· Mentor: Prof. Elia Brué	
	· Research area: Ricci curvature bounds for discrete spaces, optimal transport, convergence of diffusion processes and functional inequalities in spectral theory	
	· Member of Statistics and Mathematics reading group	
	Bocconi Student Association for Mathematical Sciences	
	Founding and Board Member, Co-Head Pure Math Division	Sep 2025 - Present
	· Aim: introduce Bocconi students to mathematical sciences, through conferences with professors, collaborative study and chats	
	Department of Decision Sciences, Bocconi	
	Reading Seminars Information Geometry	2025
	Research Internship Algebraic Topology	2025
	Innocenzo Gasparini Institute for Economic Research, Bocconi	
	Research Assistant	2023
	· 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)	
PROJECTS	saLM-1: Self-Aware Language Model Ensemble (LLM architecture)	2025
(MORE ON GITHUB)	Adversarial Robustness Pipeline (CNN adversarial training)	2025
	Wordle Guesser (Entropy-based guesser)	2025
	Movie Recommendation System (Web app)	2025
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	