

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: ["Can Machine Learning Aid Econometrics?"](#)
- 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
- Presenting [this](#) and [this](#) paper in the Stats and Maths 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)

SELECTED PROJECTS

[saLM-1: Self-Aware Language Model Ensemble](#) (LLM ensemble architecture) 2025

[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