

Matilde Dolfato

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EDUCATION

Bocconi University, Milan, Italy

M.Sc. Artificial Intelligence

- Courses: Linear Algebra, Algorithms for Opt and Inference, Software Eng, Deep and Reinforcement Learning, NLP, Computer Vision, Infomation Thoery

Sep 2024–Present

B.Sc. Economic and Social Sciences

2021–2024

- Advised by Prof. Jérôme Adda

· Final work: *Can Machine Learning Aid Econometrics?*

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 *double descent* 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
- Two presentations (1,2) to the Stats and Maths reading group within BIDSA

Founding and Board Member, Co-Head Pure Math Division

Sep 2025–Present

Bocconi Student Association for Mathematical Sciences

- Aim: introduce Bocconi students to mathematical sciences, through conferences with professors, collaborative study and chats

Reading Seminars Information Geometry

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)

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