Matilde Dolfato

matilde (dot) dolfato (at) studbocconi.it | github.com/matildedol | linkedin.com/in/matilde-dolfato

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 (BIDSA)
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 to the Stats and Maths reading group within BIDSA

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