Matteo Alessandro D'Alessandro

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Education

HEC Paris, MSc in International Finance - Double Degree Ecole Polytechnique-HEC Paris, France
Sept 2024 - Mar 2026

- **Thesis**: "LLMs applied to trading" - Investigated forward-looking language in 10-Ks and LLM sentiment on future-auxiliary sentences, evaluating DJIA-30 portfolios with rigorous Carhart-4 risk adjustment
- XTX Excellence Scholarship of 8k for high-achieving academic results

École Polytechnique, MSc in Data Science for Business Paris, France
Sept 2023 - Sept 2024

- GPA: 3.86/4.0, Excellence scholarship of 13k for high-achieving academic results

Relevant Coursework:
  * First Year: machine learning & deep learning for finance, optimization, numerical processing of financial data
  * Second Year: Bond Portfolio Management, Quantitative Asset Management, Fixed Income & Money Markets, Algorithmic Trading, Numerical Analysis, Financial Engineering

University of Pisa Pisa, IT
BSc in Mechanical Engineering *Oct 2019 - Oct 2023*

- Sant'Anna School of Advanced Studies, awarded full merit scholarship at the Italian École Normale Supérieure in applied sciences, 11 people class selected after a national competition (top 1% of total applicants)
- Grade: 109/110
- Thesis: "Discrete Modeling of the Acoustic Guitar"

Experience

BNP Paribas CIB, Quantitative Research Intern Paris, FR
June 2025 – December 2025

- Conducted an extensive literature review on Transformer-based time-series foundation models and classical stochastic processes (Ornstein–Uhlenbeck, GARCH, Heston) to scope research directions
- Designed and coded a scalable Python/PyTorch pipeline for data preprocessing, fine-tuning, and evaluation of foundation models
- Prototyped and modified state-of-the-art Transformer architectures from recent papers
- Benchmarked candidate models through large-scale back-testing and hyper-parameter sweeps, assessing predictive accuracy, robustness and computational efficiency
- Documented findings and presented weekly insights to the Data & AI Lab, contributing to the roadmap for foundation models

Giskard, Machine Learning Researcher Intern Paris, FR
Apr 2024 - Sept 2024

- Giskard offers an AI testing platform to help enterprises mitigate AI risks, trusted by clients like Crédit Agricole, BNP, and BPCE
- Suggested solutions to clients to improve their ChatBot security and performance
- Evaluated and debugged LLM systems, focusing on Retrieval Augmented Generation (RAG)
- Led Red Teaming efforts, simulating cybersecurity attacks and recommending architectural improvements to reduce risks
- Collaborated with Machine Learning Researchers and Project Managers to align and achieve project objectives
- Engaged in continuous research and technological surveillance to contribute to the development of a proprietary ChatBot

Extracurricular Activities

Asd D'Albafiorita, Volunteer Staff Jun 2014 - Jul 2017

- Animator of summer groups organized at a neuro-psycho-motor rehabilitation center to carry out integration activities between children with and without disabilities.

Music 2010 - Ongoing

- Playing electric guitar for 14 years and producing original songs.
- Studied at a musical institute for Classical Guitar (2011 - 2015)

Languages & Computer Skills

- **Software and Programming**: Python (Proficient), SQL, R, MATLAB, Simulink, LaTeX
- **Languages**: Italian (Native), English (Fluent) - IELTS certificate 7.5/9.0 (2023), French (Intermediate)

Achievements

- Bronze medal at the national level of the Italian Physics Olympiad - Apr 2019
- Team competition at the Italian Mathematical Olympiad (national level) for three years in a row (2017 - 2018 - 2019)