Mario Trerotola

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Summary

Versatile AI Researcher and Technology Leader with a proven track record in quantitative finance, blockchain forensics, and machine learning. Solid background in engineering and economics, supported by ongoing Ph.D. research and prior entrepreneurial experience. Skilled in designing and implementing end-to-end solutions that combine cutting-edge AI with scalable software architectures.

Education

Ph.D. in Artificial Intelligence
Turin, Italy
Politecnico di Torino
Oct 2022 – Nov 2025

- Research focus: anomaly detection, blockchain asset forensics, and financial market oversight.
- Funded by Google for AI applications in market surveillance, integrating Large Language Models and RPA.
- Published in Q1 AI journals; recognized for bridging engineering, computer science, and finance.

M.Sc. in Data Science and Innovation Management
Salerno, Italy
University of Salerno
Feb 2020 – Jul 2022

- Graduated with 110/110 cum laude.
- Thesis on using Neural Networks for cryptocurrency trading algorithms (published in *Expert Systems with Applications*).
- Built advanced knowledge in ML, data-driven decision-making, and large-scale data management.

B.Sc. in Economics and Management
Rome, Italy
LUISS Guido Carli
Oct 2017 – Jul 2020

- Focused on quantitative methods and AI applications in financial markets.
- Thesis on AI-based portfolio management, with over 1,900 repository downloads.

Experience

Co-Founder & CTO
Turin, Italy
RELLAI
Apr 2023 – Present

- Spearhead platform development for AI-driven home renovation risk management and project matching.
- Lead full-stack engineering, cloud deployments (AWS/GCP), and integration of LLM-based automation.
- Achieved early-stage funding and expanded to 10+ construction companies and over 15 live projects.

AI Scientist
Rome, Italy
CONSOB (Commissione Nazionale per le Società e la Borsa)
Apr 2024 – Present

- Developed NLP and LLM solutions to automate market abuse detection and regulatory compliance checks.
- Built sophisticated web-crawling modules and OCR pipelines for large-scale data extraction.
- Streamlined high-volume consumer report analysis, significantly reducing regulatory response time.

Founder in Residence
Turin, Italy
Exor Ventures
Jan 2024 – Apr 2024

- Selected among 40 participants in a highly competitive venture-building program.
- Refined go-to-market strategies and secured top-tier funding within the cohort.
- Gained deep insight into venture capital and startup scaling best practices.

AI Researcher
Salerno, Italy
University of Salerno
Dec 2021 – Jun 2022

- Investigated machine learning techniques for blockchain markets, consistently identifying profit opportunities.

- Partnered with Sociology Dept. to examine motivation factors in knowledge exchange—highlighting AI's interdisciplinary potential.

Selected Projects & Publications

Algorithmic Trading for Cryptocurrencies using Neural Networks (2023)
Expert Systems with Applications, Elsevier
Parente, Rizzuti, **Trerotola**

AI-Driven Education Tools for Cross-Cultural Management (2024)
Management of Sustainability and Well-Being, Fondazione CUEIM
Della Piana, Di Vincenzo, Signore, **Trerotola**, *et al.*

Technical Skills

Programming: Python, TypeScript, JavaScript, SQL, Go, R **Frameworks/Tools:** PyTorch, TensorFlow, FastAPI, Docker, Kubernetes, Node.js, React, Next.js, Tailwind CSS, Redis, AWS, GCP, .NET **Databases:** Microsoft SQL Server, MongoDB, Prisma **AI/ML:** NLP, Large Language Models, Time Series Forecasting, Computer Vision **Data/Quant:** Quantitative Analysis, Anomaly Detection, Blockchain Forensics, High-Volume Data Pipelines

Soft Skills

- **Leadership & Mentoring:** Led cross-functional teams and mentored junior engineers.
- **Strategic & Analytical:** Bridged technical and business objectives in high-stakes projects.
- **Communication:** Effectively distill complex models for diverse audiences.
- **Problem-Solving:** Proven track record in tackling large-scale data challenges and automations.

Languages

- **Italian:** Native
- **English:** Full Professional Proficiency (C2)
- **French:** Intermediate (B1)