Matteo Morini, PhD

Chief AI Officer | Data Science Leader
https://mmorini.github.io/

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Bio

Italian citizen. Swiss permanent resident (permit C).

Research, corporate-transferable, and soft skills

I am a high-impact leader with 20+ years of experience bridging the gap between cutting-edge academic research and scalable fintech/biotech solutions. Expert in building high-performing data teams from scratch and delivering "anti-hype" explainable AI models that drive billion-euro decision-making. My professional signature is a "Wide and Deep" strategic methodology: a first-principles understanding of complex systems paired with the hands-on ability to deploy production-grade ML pipelines.

I combine a comprehensive vision of the entire analytics pipeline - from data sourcing to executive storytelling - with the technical depth required to develop novel, ground-up algorithms, prioritizing dependable and explainable architectures over "vanity" metrics to ensure foundational business value.

I hold advisory positions for deeptech startups and provide consultancy on advanced data analytics – imaging and signal processing in particular – to the biotech and bioinformatics research industry in a fractional capacity.

I am a patient, empathic person, and highly communicative leader capable of navigating diverse environments and resolving complex conflicts while keeping groups focused and morale high. The Voltairean motto “Perfect is the enemy of good” underpins most of my decision-making, ensuring the delivery of high-quality results in complex, high-pressure environments.

With over a decade of experience lecturing postgraduate students and delivering specialist speeches, I excel at translating complex technical concept into captivating insights for non-technical stakeholders.

Research interests

Complex Systems, Complex Networks, Agent-Based Modeling, Machine Learning, Computational Economics, Econometrics, Operational Research, Data Mining.

Education

2017 PhD in Computer Science. École Doctorale Infomaths, Ecole Normale Supérieure, Lyon, France.

2001 MS in Economics. Università degli Studi, Torino, Italy.

Employment history

Current positions

2025-present Synthesight by iB3 S.A., Partner, Lugano, Switzerland.
- *Leading strategic development of synthetic populations to drive advanced simulation and predictive modeling.*

2024-present Unravel Global, CAIO, Helsinki, Finland.
- *Directing a massive NLP research and implementation effort at scale to power human-augmented AI for global fact-checking.*
- *Bridging the gap between high-level AI strategy and production-grade implementation.*

2023-present To-Ca$h, CDO, Turin, Italy.
- *Architected an AI-based Treasury Management engine from the ground up.*
- *Successfully secured seed funding and transitioned the venture to post-revenue status within the first two years.*

2022-present Batonics AB, Data science advisor and partner, Stockholm, Sweden.
- *Leading end-to-end product development for algorithmic detection of non-conventional investable opportunities*
- *Onboarded and delivered pilots for top-tier real estate firms.*

2020-present Yodh Research S.A., Partner, Head of Data Operations, Lugano, Switzerland.
- *Supervising data strategy and operations across Fintech, Biotech, and Adtech verticals.*

Previous positions

2020-2024 Credimi S.p.a. / Banca CF+, Data Scientist, Milan, Italy.
- *Engineered credit scoring models for 100k+ applications, facilitating €17 billion in funding volume.*
- *Built and led high-performing data teams, overseeing hiring, mentoring, and technical growth.*
- *Implemented "glass-box" explainable ML and anti-fraud/AML modeling to meet strict regulatory standards.*
- *Deployed a full-scale production pipeline using Python, Kubernetes, AWS Datalake, and MLflow.*

2018-2020 Universität Koblenz-Landau, postdoctoral researcher, Koblenz, Germany.
- *Executed large-scale distributed computing (HPC) for socio-economic modeling and NLP.*
- *Served as the strategic liaison between business units and fundamental computer science research teams at the Institut für Wirtschafts- und Verwaltungsinformatik.*

2008-2019 University of Torino, Department of Economics and Statistics, tenured research scientist, Torino, Italy.
- *Modernized traditional econometric frameworks by integrating algorithmic simulations and graph-theoretical metrics, moving beyond standard linear models to capture far-from-equilibrium market dynamics.*
- *Published foundational evidence of bounded rationality in economic behavior through the integration of legacy and modern data systems.*

2008 University of Milan, Department of Information Technologies, Milano, Italy.
- *Developed a high-impact simulation model for regional emergency medical services (EMS) to rationalize expenditure and optimize (heli)ambulance deployment under shrinking budgets.*

2004 Exystence Thematic Institute for Complexity and Innovation, ARC Systems Research, Vienna, Austria.
- *Successfully coordinated the "Exystence" Network of Excellence (EU-funded), managing cross-border collaboration between 10+ European research institutions.*
- *Led the dissemination of Complex Systems science, organizing high-level workshops and thematic institutes that defined the roadmap for European computational research.*

2001-2008 LABORatorio – Collegio Carlo Alberto Foundation, researcher, Torino, Italy.
- *Developed and maintained longitudinal micro-simulation models (WHIP) used for National Social Security (INPS) policy impact analysis, processing millions of individual records.*

Visiting appointments and other positions

2018 Visiting scholar, National Institute of Informatics, Tokyo, Japan

2016 Santa Fe Institute CSSS, Santa Fe, NM

2014–present Member of the board of directors, Vice president (**2015–2022**), Swarm Development Group

Technical Arsenal

Strategic Data Science & AI Methodologies: Agent-Based Modeling (ABM), Complex Networks, Graph-Theoretical Metrics, Semi-Supervised Learning (SSL), Explainable AI (xAI / "Glass-box" modeling).

Programming & Engineering: Python (full scientific stack); HPC (C, C++, Java, Fortran, applied to large-scale socio-economic simulations); R, SQL, Spark.

Infrastructure & Ops: Cloud/DevOps (AWS, Azure Ecosystems, Kubernetes, Docker); CI/CD (Codefresh, GitHub Actions, MLflow for model versioning and lifecycle management).

Domain Expertise: Econometrics, Longitudinal Micro-simulation, NLP at scale, Signal & Image Processing for Biotech.

Selected publications

Books (foundational theory)

"Rethinking Macroeconomics with Endogenous Market Structure", Cambridge University Press, ISBN 978-11-0869701-9, **2019** (with M. Mazzoli, P. Terna)

"Agent-based Models of the Economy. From Theories to Applications", Palgrave Macmillan, London, ISBN 978-1-349-67406-0, **2015** (with R. Boero, M. Sonnessa, P. Terna)

Key peer-reviewed research

"Personal Income Tax Reforms: a Genetic Algorithm Approach", European Journal of Operational Research, Volume 264, Issue 3, pp. 994-1004, doi:10.1016/j.ejor.2016.07.059, Elsevier Publishing, **2018** (with S. Pellegrino)

"Business Cycle in a Macromodel with Oligopoly and Agents' Heterogeneity: an Agent-Based Approach", Italian Economic Journal, available online, doi:10.1007/s40797-017-0058-y, Springer, **2017** (with P. Terna, M. Mazzoli)

"Detecting Global Bridges in Networks", Journal of Complex Networks, Volume 4, Issue 3, pp. 319-329, doi:10.1093/comnet/cnv022, **2016**, Oxford University Press (with P. Jensen, T. Venturini, A. Vespignani, M. Jacomy, J.-P. Cointet, P. Mercklé, M. Karsai, E. Fleury)

Languages

Italian: native.

English and French: full professional proficiency (C2). Academic fluency and C-suite stakeholder management.

Spanish: limited working proficiency.