

Tommaso Dolci

📍 Address Via Bonvicino 34, 20025 Legnano, Italy
✉️ Email tommaso.dolci@tuwien.ac.at
👤 GitHub github.com/TommasoD

👤 LinkedIn [tommasodolci](#)
👤 Scholar scholar.google.com/XmlhawAAAAJ

Bio

Pre-Doc researcher at TU Wien and Marie Skłodowska-Curie doctoral fellow under the supervision of Katja Hose. Previously, I worked as Responsible AI Engineer in Accenture, and as Research Assistant in Politecnico di Milano and Lero – the Irish Research Centre for Software, collaborating with Letizia Tanca, Luciano Baresi and Bashar Nuseibeh. I hold a MSc in Computer Science and Engineering from Politecnico di Milano with a thesis on social bias in language models. My main interests concern **LLMs, responsible AI, and data science**. I am an advocate of Digital Humanism, the initiative to preserve human agency in digital technology.

EDUCATION

Politecnico di Milano MSc in Computer Science and Engineering – Score: 110/110	Milan, Italy 2018–2021
– Final thesis on social bias evaluation and mitigation in language models ↗ Supervisor: Prof. Letizia Tanca	
Politechnika Wrocławskiego International Mobility, Faculty of Computer Science and Management	Wrocław, Poland 2019–2020
Politecnico di Milano BSc in Engineering of Computing Systems	Milan, Italy 2015–2018
Liceo Galileo Galilei High School Diploma in Classical Studies	Legnano, Italy 2010–2015

EXPERIENCE

TU Wien Pre-Doc Researcher, MSCA Doctoral Fellow	Vienna, Austria Oct 2025–Current
– ARMADA – Horizon/MSCA project on factuality and hallucination in LLMs supported by structured knowledge Supervisor: Prof. Katja Hose.	
Accenture – RAI/LLM Center of Excellence R&D unit Responsible AI Engineer, Prompt Engineer	Milan, Italy Sep 2024–Sep 2025
– Responsible AI, quantitative testing, red teaming of GenAI, agentic AI and multi-agent systems.	
Lero – the Irish Research Centre for Software Post-Graduate Researcher	Limerick, Ireland Sep 2023–Apr 2024
– Responsible software engineering for digital humanism, from requirements to testing of ML-based software Supervisor: Prof. Bashar Nuseibeh.	
Politecnico Di Milano Research Assistant	Milan, Italy Feb 2022–Aug 2023
– EMELIOT – Project of national interest (PRIN) on ML-based software, cloud computing, and federated learning Supervisor: Prof. Luciano Baresi.	
– Health Big Data – Government-funded project to develop federated architectures for storage and use of clinical data Supervisor: Profs. Letizia Tanca and Marco Gribaudo.	

PUBLICATIONS

Author of 17 peer-reviewed articles, including 2 first-author Q1 journals. 82 citations on Scholar and 5 h-index as of Oct '25.

JOURNALS

- [A1] F. Azzalini, **T. Dolci**, and M. Vagaggini, “An interpretable deep learning framework for predicting hospital readmissions from electronic health records”, *Smart Health*, vol. 37, p. 100581, 2025. doi: 10.1016/j.smhl.2025.100581.
- [A2] **T. Dolci**, L. Amata, C. Manco, F. Azzalini, M. Gribaudo, and L. Tanca, “Tools for healthcare data lake infrastructure benchmarking”, *Information Systems Frontiers*, pp. 1–22, 2024. doi: 10.1007/s10796-023-10468-5.
- [A3] L. Baresi, **T. Dolci**, G. Quattrocchi, and N. Rasi, “A multi-faceted analysis of the performance variability of virtual machines”, *Software: Practice and Experience*, vol. 53(11), pp. 2067–2091, 2023. doi: 10.1002/spe.3244.
- [A4] **T. Dolci**, F. Azzalini, and M. Tanelli, “Improving gender-related fairness in sentence encoders: A semantics-based approach”, *Data Science and Engineering*, vol. 8, pp. 177–195, 2023. doi: 10.1007/s41019-023-00211-0.

INTERNATIONAL CONFERENCES AND WORKSHOPS

- [B1] L. Baresi, **T. Dolci**, and I. Wehbe, “On assessing heterogeneity management solutions in federated learning systems”, in *2024 IEEE/ACM 17th International Conference on Utility and Cloud Computing (UCC)*, IEEE, 2024, pp. 517–522.
- [B2] L. Baresi, M. Camilli, **T. Dolci**, and G. Quattrocchi, “A conceptual framework for quality assurance of llm-based socio-critical systems”, in *39th IEEE/ACM International Conference on Automated Software Engineering (ASE)*, IEEE/ACM, 2024, pp. 2314–2318.
- [B3] C. Criscuolo and **T. Dolci**, “Exploring fairness interpretability with FairnessFriend: A chatbot solution”, in *IEEE 40th International Conference on Data Engineering Workshops (ICDEW)*, IEEE, 2024, pp. 246–253.
- [B4] D. Azzalini*, F. Azzalini*, C. Criscuolo*, **T. Dolci***, D. Martinenghi, and S. Amer-Yahia, “Loss compensation in multi-session recommendation under limited item availability”, in *Proceedings of the 27th International Conference on Extending Database Technology (EDBT)*, 2024, pp. 522–533.
- [B5] T. Covoli, **T. Dolci**, F. Azzalini, D. Piantella, E. Barbierato, and M. Gribaudo, “Workflow characterization of a big data system model for healthcare through multiformalism”, in *Computer Performance Engineering and Stochastic Modelling: EPEW/ASMTA 2023*, Springer, 2023, pp. 279–293.
- [B6] C. Manco, **T. Dolci**, F. Azzalini, E. Barbierato, M. Gribaudo, and L. Tanca, “HEALER: A data lake architecture for healthcare”, in *Proceedings of the EDBT/ICDT Workshops*, vol. 3379, CEUR-WS.org, 2023.
- [B7] C. Criscuolo, **T. Dolci**, and M. Salnitri, “Towards assessing data bias in clinical trials”, in *Heterogeneous Data Management, Poly-stores, and Analytics for Healthcare: VLDB Workshops*, Springer, 2023, pp. 57–74.
- [B8] D. Azzalini*, F. Azzalini*, C. Criscuolo*, **T. Dolci***, D. Martinenghi, and S. Amer-Yahia, “SoCRATE: A recommendation system with limited-availability items”, in *Proceedings of the 31st ACM International Conference on Information and Knowledge Management (CIKM)*, ACM, 2022, pp. 4793–4797.
- [B9] **T. Dolci**, “Fine-tuning language models to mitigate gender bias in sentence encoders”, in *2022 IEEE Eighth International Conference on Big Data Computing Service and Applications*, IEEE, 2022, pp. 175–176.

NATIONAL CONFERENCES

- [C1] C. Criscuolo, **T. Dolci**, and M. Salnitri, “Mitigating unfairness in machine learning: A taxonomy and an evaluation pipeline”, in *32nd Symposium on Advanced Database System*, CEUR-WS.org, 2024, pp. 217–226.
- [C2] M. Bavaro, **T. Dolci**, and D. Piantella, “Biovec-ita: Biomedical word embeddings for the italian language”, in *31st Symposium on Advanced Database System*, CEUR-WS.org, 2023, pp. 505–513.
- [C3] D. Azzalini, F. Azzalini, C. Criscuolo, **T. Dolci**, D. Martinenghi, L. Tanca, and S. Amer-Yahia, “SoCRATE: A framework for compensating users over time with limited availability recommendations”, in *30th Symposium on Advanced Database System*, CEUR-WS.org, 2022, pp. 538–545.
- [C4] F. Azzalini, **T. Dolci**, and M. Tanelli, “Bias score: Estimating gender bias in sentence representations”, in *30th Symposium on Advanced Database System*, CEUR-WS.org, 2022, pp. 554–561.

* = equal contribution from the authors.

ACADEMIC ROLES

Teaching Assistant at University of Limerick:

Software Testing and Inspection

Fall 2023

Teaching Assistant at Politecnico Di Milano:

*Computer Science A for Mathematical Engineering
Data Bases 1 for Computer Science Engineering
Communication and Argumentation for Engineering*

Fall 2022

Fall 2022

Spring 2022

Thesis co-advisor of 10 MSc students at Politecnico di Milano. Five most recent entries:

J. Huang, *Fairness in Machine Learning: Unifying Statistical and Causal Perspectives*

Oct 2024

M. Li, *Approaches to Unfairness Mitigation in AI: An Exploratory Research*

Jul 2024

D.O. Vittorio, *A Survey on Fairness: The Influence of Protected Attributes on Machine Learning Algorithms*

Apr 2024

A. Restelli, *Dynamic Selection Techniques for Federated Learning*

Dec 2023

F. Petroli, *Religious and Ethnic Bias in Word Vector Spaces*

Dec 2023

PC Member:

WALS 2023, CMSL 2023/ 2024, CIKM 2024 (Demo)

Reviewer:

TOSEM, ICTAI, HIJ

Sub-reviewer:

ICDE, SIGMOD, ASE

SKILLS

- **OS:** Windows, Linux, WSL
- **Programming:** Python, C, Java, SQL, HTML, CSS, JavaScript
- **Libraries:** HuggingFace, LangChain, Pandas, Sklearn, NumPy, Langchain, Tensorflow, PyTorch, Matplotlib
- **Additional:** \LaTeX , Git, VS Code, Colab, Jupyter, Jira, MS Office and Project, UML, Power BI, Photoshop, MS Clipchamp

LANGUAGES

- **Italian:** native speaker
- **English:** excellent user
 - IELTS Academic - Overall Score: 8 Oct 2017
- Limited understanding of **Spanish** and **German**.

REFERENCE CONTACTS

- **Letizia Tanca**, Full Professor at Politecnico di Milano
- **Bashar Nuseibeh**, Full Professor at The Open University
- **Marco Gribaudo**, Associate Professor at Politecnico di Milano

@ letizia.tanca@polimi.it

@ bashar.nuseibeh@open.ac.uk

@ marco.gribaudo@polimi.it

Milan, Italy

Jun 2022

Vienna, Austria

Nov 2023

WORKSHOPS

Fairness and Machine Learning for Health

Milan, Italy

Jun 2022

Organised by Politecnico di Milano

“Can Machines Save the World?” – Digital Humanism Fellowship Conference

Vienna, Austria

Nov 2023

Organised by IWM and TU Wien

SEASONAL SCHOOLS

TU Wien

Vienna, Austria

2nd ACM Summer School on *Digital Humanism*

September 2023

University of Florida

Remote

Autumn School on *Situation Awareness in Cognitive Technologies*

November 2022

TU Wien

Vienna, Austria

Summer School on *Digital Humanism*

September 2022

Peter the Great Polytechnic University

St. Petersburg, Russia

Summer School on *Energy Efficiency and Sustainable Development*

August 2019

★ SCHOLARSHIPS & GRANTS

- Doctoral Fellowship under the Horizon-MSCA project ARMADA, EU grant number 101168951 2025
- Research scholarship at Lero under SFI grant number 13/RC/2094_2 2023
- Registration fee scholarship at 2nd ACM Digital Humanism Summer School 2023
- Travel scholarship at Autumn School on Situation Awareness in Cognitive Technologies [*not utilised*] 2022
- Scholarship for academic merits from Fondazione Famiglia Legnanese 2015

💡 INTERESTS

- Practised competitive **fencing** for 15+ years, play **football** regularly, and co-organises a local **beach volley** league involving 100+ people. Currently working on my 10km marathon time (48min).
- Subscriber to **La Scala** for 3+ years. I like chess too! (Lichess ELO ~1500 blitz and bullet)
- I have been **representative** of international students for UL Fencing Club, **support buddy** for foreign students in Politecnico di Milano, and **campus ambassador** in Politecnico di Milano.