

Steve Azzolin

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Education

University of Trento

ELLIS PH.D. STUDENT

- Supervisors: Bruno Lepri & Andrea Passerini
- ELLIS partner: Pietro Liò (University of Cambridge)

Trento, IT

Nov. 2023 - Curr

University of Cambridge

M.S. THESIS ABROAD

- Thesis: Global Explainability of GNNs via Learned Logic Formulas

Cambridge, UK

June. 2022 - Sept. 2022

University of Trento

M.S. IN ARTIFICIAL INTELLIGENCE SYSTEMS

- Final score: 110/110 cum laude

Trento, Italy

Sept. 2020 - March. 2023

University of Trento

B.S. IN COMPUTER SCIENCE

- Final score: 110/110 cum laude
- Thesis: Unsupervised learning for customer segmentation and its interpretability

Trento, Italy

Sept. 2017 - Jul. 2020

Research Experience

TU Wien Machine Learning Unit

RESEARCH VISITING STUDENT

- Investigating formal properties of graph explanations

Vienna, Austria

Oct. 2025 - Dec. 2025

Structured Machine Learning Lab

RESEARCH ASSISTANT

- Benchmarked and surveyed SOTA tools for GNN Explainability

Trento, Italy

May 2023 - Oct. 2023

Signals & Interactive Systems Lab

RESEARCH INTERN

- Tested, developed, and analyzed LLMs for Sentiment Analysis
- Improved the SOTA for the Italian language from 0.64 to 0.69 of F1 score

Trento, Italy

Feb. 2020 - Jan. 2022

Blue Reply

MACHINE LEARNING INTERN

- Applied and optimized unsupervised ML techniques for customer segmentation

Padova, Italy

Feb. 2020 - Jun. 2020

Awards

NeurIPS 2025 Top Reviewer

NEURIPS

2025

Research Scholarship

UNIVERSITY OF TRENTO

2023

Student Scholarship

UNIVERSITY OF TRENTO

2017-2019

Scholarship for Academic Merits

MUNICIPALITY OF COLCERESA

2017

Publications

- [Azzolin S.](#), Teso S., Lepri B., Passerini A., Malhotra S., "GNN Explanations that do not Explain and How to find Them". ICLR 2025
- Kazmierczak R., [Azzolin S.](#), *et al.*, "Enhancing Concept Localization in CLIP-based Concept Bottleneck Models". TMLR 2025
- Kazmierczak R., [Azzolin S.](#), *et al.*, "Benchmarking XAI Explanations with Human-Aligned Evaluations". AAAI 2025
- [Azzolin S.](#), Malhotra S., Passerini A., Teso S. "Beyond Topological Self-Explainable GNNs: A Formal Explainability Perspective". ICML 2025
- [Azzolin S.](#), Longa A., Teso S., Passerini A. "Reconsidering Faithfulness in Regular, Self-Explainable and Domain Invariant GNNs". ICLR 2025
- Longa A., [Azzolin S.](#), Santin G., Liò P., Lepri B., Passerini A., "Explaining the Explainers in GNNs: A Comparative Study". ACM Comp. Surv. 2024
- Zaghen O., Longa A., [Azzolin S.](#), *et al.*, "Sheaf Diffusion Goes Nonlinear: Enhancing GNNs with Adaptive Sheaf Laplacians". GRaM @ ICML 2024
- M. Jaeger, A. Longa, [S. Azzolin](#), O. Schulte, A. Passerini "A Simple Latent Variable Model for Graph Learning and Inference". LOG 2023

- [Azzolin S.](#), Longa A., Barbiero P., Liò P., Passerini A. "Global Explainability of GNNs via Logic Combination of Learned Concepts". ICLR 2023
- Roccabruna G., [Azzolin S.](#), Riccardi G. "Multi-source Multi-domain Sentiment Analysis with BERT-based Models". LREC 2022
- Mousavi S., Roccabruna G., Tammewar A., [Azzolin S.](#), Riccardi G., "Can Emotion Carriers Explain Automatic Sentiment Prediction?". WASSA @ ACL 2022

Talks & Tutorials

Trustworthy and Collaborative Artificial Intelligence Workshop 2025

Pisa, Italia

- Oral presentation of *Reconsidering Faithfulness in Regular, Self-Explainable and Domain Invariant GNNs*

10 June. 2025

Alan Turing Institue

Virtual

- Hands-on Tutorial on Explainability for GNNs

16 Nov. 2023

Cambridge Talks 2022

Virtual

- Presented the paper *Global Explainability of GNNs via Logic Combination of Learned Concepts*

24 Nov. 2022

Academic Service

Organiser: LoG Conference 2024 & 2025 (Local meetup chair),

Reviewer: ICML 2025, ICLR 2025, LOG 2025, ICLR 2025, ACM CSUR, NeurIPS 2025, Actionable Interp.@ICML 2025, TNNLS, ICLR 2024, LoG 2024, UniReps@NeurIPS 2023, COLING 2022

Networks

LOG Local Meetup

ORGANIZER

Nov. 2023

- Organized the first Italian local meetup of the LOG conference, providing an environment for researchers in this field to foster networking.

Lead the Future

MENTEE & REVIEWER

Sep. 2021 - Curr.

- LeadTheFuture is a leading mentorship non-profit organization for students in STEM, with an acceptance rate below 20, empowering top-performing students to achieve their goals and contribute to their communities

Extracurricular Training

Generative Modeling Summer School

ATTENDEE

July. 2024

Cambridge ELLIS Machine Learning Summer School

ATTENDEE

July. 2022

Eastern European Machine Learning Summer School

ATTENDEE

July. 2022

Serbian Machine Learning Workshop

ATTENDEE

May. 2022

Cornell University, University of Maryland, and Max Planck Institute Summer School

ATTENDEE

Aug. 2021