

Steve Azzolin

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Education

Fondazione Bruno Kessler

ELLIS PH.D. STUDENT

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

Trento, IT

Nov. 2023 - Curr

University of Cambridge

RESEARCH VISITING STUDENT

- 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

Structured Machine Learning Lab

RESEARCH ASSISTANT

- Benchmarked and surveyed several SOTA tools for GNN Explainability

Trento, Italy

May 2022 - Oct. 2023

Signals & Interactive Systems Lab

RESEARCH INTERN

- Tested, developed, and analyzed **Deep Sentiment Analyzer** for Italian corpora
- Improved the state-of-the-art 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

Publications

- 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
- **Azzolin S.**, Longa A., Barbiero P., Liò P., Passerini A. "Global Explainability of GNNs via Logic Combination of Learned Concepts". LOG 2022, Extended Abstract
- Longa A., **Azzolin S.**, Santin G., Cencetti G., Liò P., Lepri B., Passerini A. "Explaining the Explainers in Graph Neural Networks: A Comparative Study". ACM Computing Surveys (Under Review)
- 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.**, Giuseppe Riccardi "Can Emotion Carriers Explain Automatic Sentiment Prediction? A Study on Personal Narratives". WASSA @ ACL 2022

Talks & Tutorials

Alan Turing Institue

- Hands-on Tutorial on XAI4GNNs

Virtual

16 Nov. 2023

EVil Meeting

- Presented the ongoing work for a project on Continuous Prompt Transferability for Large Language Models

Virtual

16 Oct. 2023

AIT Journal Club

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

In person

3 Feb. 2023

Cambridge Talks 2022

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

Virtual

24 Nov. 2022

Networks

LOG Local Meetup

ORGANIZER

Nov. 2023

- Organized the first Italian local branch of the LOG 2023 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

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

CMMRS 2021

ATTENDEE

Aug. 2021

Competitions & Awards

COMPETITIONS

2019 **Finalist**, Soccer Data Challenge

Trento, Italy

2017 **First Place**, Memorie Migranti Video Making National Contest

Gualdo Tadino, Italy

2015 **Finalist**, Robocup Junior Italia

Milan, Italy

AWARDS

2023 **Awarded**, 6 months Research Scholarship at the University of Trento

Trento, Italy

2017-2019 **Awarded**, Opera Universitaria Annual Scholarship

Trento, Italy

2017 **Awarded**, Mason Vicentino Scholarship for Academic Merits

Colceresa, Italy