



Matteo Merler

Date of birth: 17/07/2000 | **Nationality:** Italian | **Phone number:** (+39) 3423646961 (Mobile) |

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Address: Via Cesarini 25, 38121, Trento, Italy (Home)

WORK EXPERIENCE

07/01/2025 – CURRENT Trento, Italy

RESEARCHER FEDERAZIONE BRUNO KESSLER

Working as a pre-doctoral researcher in the NLP group under the supervision of Bernardo Magnini. My current research interests lie at the intersection of Reinforcement Learning, formal planning and Language/Vision Language Models.

Address Via Sommarive 18, 38123, Trento, Italy | **Website** nlplab.fbk.eu

01/08/2024 – 30/09/2024 Espoo, Finland

RESEARCH ASSISTANT AALTO UNIVERSITY

Full time research assistant position at the Foundation Models for Language and Reinforcement Learning (Larel) lab under prof. Pekka Marttinen for a research project advancing the work from my Master's Thesis.

Address Konemiehentie 2, 02150, Espoo, Finland

01/02/2022 – 30/06/2022 Trento, Italy

BACHELOR'S THESIS INTERNSHIP THINKIN

Formative internship in collaboration with the University of Trento. I analyzed, designed and built a prototype for an indoor navigation system specifically targeted for supermarkets, to be used with the company's own location tracking system:

- Analyzed the problem and available data coming from the company's deployments and tracking system.
- Implemented a dynamic Python prototype adapting state of the art routing systems to react in real time to store conditions.
- Gathered performance data and evaluated the results as a part of my Bachelor's Thesis work.

During my first real working experience I learned invaluable collaboration skills by working with great teammates and mentors. Overseeing a project from the beginning to the end I was able to get familiar with the proper steps of analyzing and prototyping and deliver a working program at the end of my tenure.

Address Via Antonio da Trento 8, 38122, Trento, Italy

05/06/2017 – 23/06/2017 Novaledo, Italy

INTERNSHIP MENZ&GASSER

Helped with day to day tasks in the company's IT office as a part of a high school project.

- Pitched ideas on how to improve performance and efficiency.
- Processed a range of documentation and entered information into databases.
- Learned new tools and technologies and had a good first experience in a working environment as a student.

Address Via dei Campi 23, 38050, Novaledo, Italy

EDUCATION AND TRAINING

01/09/2022 – 30/09/2024 Espoo, Finland

MSC IN MACHINE LEARNING, DATA SCIENCE AND ARTIFICIAL INTELLIGENCE Aalto University

During my studies, I focused on the interaction of Large Language Models (LLMs) with Reinforcement Learning (RL) agents to create comprehensive systems that can learn from experience.

My Master's Thesis was awarded as one of the three best Theses at the Aalto University School of Science in 2024.

Publications:

- **In-Context Symbolic Regression: Leveraging Large Language Models for Function Discovery** (<https://arxiv.org/abs/2404.19094>), published in the ACL 2024 Student Research Workshop.
- **Generating Code World Models with Large Language Models Guided by Monte Carlo Tree Search** (<https://arxiv.org/abs/2405.15383>), published at NeurIPS 2024.

Relevant courses:

- CS-E4890 Deep Learning
- ELEC-E5550 Statistical Natural Language Processing
- ELEC-E8125 Reinforcement Learning
- CS-E4710 Machine Learning: Supervised Methods
- CS-E4820 Machine Learning: Advanced Probabilistic Methods D

Address Konemiehentie 2, 02150, Espoo, Finland | **Website** <https://www.aalto.fi/en> |

Final grade 5/5 GPA, degree obtained with honors. | **Type of credits** ECTS | **Number of credits** 120 |

Thesis Generating Code World Models with Large Language Models Guided by Monte Carlo Tree Search

16/09/2019 – 21/07/2022 Trento, Italy
BSC IN COMPUTER SCIENCE University of Trento

Address Via Sommarive 9, 38123, Trento, Italy | **Website** <https://www.unitn.it/en> | **Final grade** 110 cum laude/110 |

Type of credits ECTS | **Number of credits** 180

01/09/2014 – 04/07/2019 Trento, Italy
HIGH SCHOOL DIPLOMA Liceo Scientifico Leonardo da Vinci

Address Via Cristoforo Madruzzo 24, 38122, Trento, Italy | **Website** <https://liceodavincitn.it> | **Final grade** 100/100

● **LANGUAGE SKILLS**

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C2	C2	C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user