

# Filippo Merlo

MSc in Cognitive Science and Computational Modeling of Language and Cognition



## About me

I have obtained an MSc in Cognitive Science and Natural Language Processing, with a keen passion for machine learning and psychology. My expertise lies in model evaluation and experimental design, encompassing both human and artificial intelligence models. Through numerous research internships, I have gained substantial experience in conducting research projects and fostering teamwork. I am confident that my curiosity, researching skills and multidisciplinary background would make me a valuable addition to the team!

## Areas of specialization

Natural Language Processing

- Vision Language Models
- Cognitive Psychology


## References


### Professor Albert Gatt


Professor in Natural Language Generation at Utrecht University, Utrecht  
a.gatt@uu.nl

### Professor Raffaella Bernardi

Professor in Computational Linguistic at Free University of Bolzano, Bozen  
Raffaella.Bernardi@unibz.it

 [filippo-merlo.github.io](https://github.com/filippo-merlo)

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## WORKING EXPERIENCE

Mar 2024 – Mar 2025

### Internship at Natural Language Processing group

RESEARCH · Utrecht-Netherlands



Master thesis research project on State of the art Vision-Language Models (VLMs) Evaluation. Dataset exploration and data curation, Model training and finetuning with PyTorch, VLMs (CLIP, BLIP-3, LLaVa-OneVision, Molmo), Vision Models (ViT, YOLO), Image Generative Models (Stable Diffusion, PowerPaint).

Sept 2023 – Feb 2024

### Internship at Language, Interaction and Computation Lab

RESEARCH · Trento-Italy



Research project on Evaluating Generative Models' Reasoning Abilities. Dataset exploration (WordNet, ConceptNet, smaller norm datasets) and data curation. Prompt Engineering and Multi-agents experimental setting.

Oct 2023 – Jan 2024

### University Tutor in Computational Linguistics

TEACHING · Trento-Italy



Tutoring students in the Computational Linguistics course, teaching foundational concepts and programming laboratory (Python, Hugging Face) and overseeing the final projects.

Dec 2020- Feb 2022

### Internship at Department of General Psychology

RESEARCH · Padova-Italy



(Sett 21-Feb 22) Thesis Project on Online Behavioural Studies on human motion perception. Online Data Collection with JsPsych and Amazon Mechanical Turk. Data analysis with R.

(Dec 20-Jun 21) Internship project on online Behavioural studies during the Covid-19 era. Programming in HTML/CSS/JavaScript.

## PROGRAMMING SKILLS

**Python:** Advanced (4 years experience). Proficient in GitHub for version control and collaboration. Strong understanding of machine learning libraries such as PyTorch, with experience in other essential ML tools and frameworks.

**LaTeX:** Advanced (4 years experience). I have extensive experience in using LaTeX for creating professional and academic documents, including research papers, reports, and presentations.

**JavaScript:** Beginner (2 years experience). I have a foundational knowledge of JavaScript and have used it for basic web development tasks, including creating dynamic web pages and simple web applications.

**R:** Beginner (2 years experience). I have a basic understanding of R and have utilized it for statistical analysis and data visualization in academic projects.

**MATLAB:** Beginner (2 years experience). I have a basic understanding of MATLAB and have utilised it for project in analysis of EEG signals (EEGLAB), basic machine learning projects and basic behavioural experiment design (Psychtoolbox).



## PUBLICATIONS

**2023** Leonardo Bertolazzi, Davide Mazzaccara, Filippo Merlo, and Raffaella Bernardi. 2023. ChatGPT's Information Seeking Strategy: Insights from the 20-Questions Game. In *Proceedings of the 16th International Natural Language Generation Conference*, pages 153–162, Prague, Czechia. Association for Computational Linguistics., Association for Computational Linguistics.

## AWARDS

**2023** *Best Evaluation Paper at INLG 2023* (<https://sigdialinlg2023.github.io/awards.html>)

## EDUCATION

Sept 2022 – Mar 2025	<b>M.Sc. in Cognitive Science - Computational Modelling of Language and Cognition.</b> TRENTO · Italy 📍 GPA: 29.5/30, Final Evaluation: 110 cum laude/110	
Sept 2021 – Aug 2022	<b>M.Sc. in Neuroscience</b> PADOVA-WARSAWA · Italy-Poland 📍 GPA: 29.9/30, Final Evaluation: Discontinued	
Sept 2018 – Sept 2021	<b>B.Sc. in Cognitive and Psychobiological Science</b> PADOVA · Italy 📍 GPA: 28.9/30, Final Evaluation: 110 cum laude/110	

## WORKSHOPS

- **CORE Project Workshop 2024**, Universitat Pompeu Fabra. Poster presentation. <https://www.upf.edu/web/glif/2024-core-workshop/program>
- **European Summer School on Artificial Intelligence (ESSAI) 2023**. Student.
- **Lectures on Computational Linguistics 2023**, University of Pisa. Poster presentation.

## LANGUAGES

<b>Italian</b>	C2	mother tongue
<b>English</b>	C2	working proficiency

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