

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

Dr. Ece Takmaz

Postdoctoral Researcher in Natural Language Processing, Utrecht University e.k.takmaz@uu.nl

 [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

2025 Filippo Merlo, Ece Takmaz, Wenkai Chen, Albert Gatt, 2025. COOCO – Common Objects Out-of-Context – Semantic Violation in Scenes: Investigating Multimodal Context in Referential Communication. *arXiv:2506.22274*

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

M.Sc. in Cognitive Science - Computational Modelling of Language and Cognition.

TRENTO · Italy

GPA: 29.5/30, Final Evaluation: 110 cum laude/110



Sept 2021 – Aug 2022

M.Sc. in Neuroscience

PADOVA-WARSAWA · Italy-Poland

GPA: 29.9/30, Final Evaluation: Discontinued



Sept 2018 – Sept 2021

B.Sc. in Cognitive and Psychobiological Science

PADOVA · Italy

GPA: 28.9/30, Final Evaluation: 110 cum laude/110



WORKSHOPS

- **NLG in the Lowlands, 2025**, Tilburg University. Poster presentation. <https://sites.google.com/view/nlg-in-the-lowlands-2025/home>
- **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

Italian	C2	mother tongue
English	C2	working proficiency

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