

# Eleonora Mancini

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<https://github.com/helemanc> | <https://www.linkedin.com/in/eleonora-mancini/> | <https://scholar.google.com/citations>

## EDUCATION

### Doctor of Philosophy - Computer Science and Engineering

Nov 2022 - Mar 2026

University of Bologna. Planned graduation date: Mar 2026.

Bologna, Italy

**Research Project:** Data Representation, Fusion and Interpretability in Multimodal Deep Learning for NLP.

**Keywords:** Speech Technologies | Signal Processing | Multimodal Learning | Interpretability

**Advisor:** Prof. Paolo Torrioni

### Master of Engineering - Artificial Intelligence

Sep 2019 - Dec 2021

University of Bologna. Final Evaluation: 110/110 with honours. GPA: 4.0

Bologna, Italy

### Bachelor of Engineering - Computer Engineering

Sep 2016 - Oct 2019

University of Bologna. Final evaluation: 101/110. GPA: 3.7

Bologna, Italy

## SELECTED PUBLICATIONS

- **Eleonora Mancini**, Federico Ruggeri, Stefano Colamonaco, Andrea Zecca, Samuele Marro, and Paolo Torrioni, 2024. "MAMKit: A comprehensive multimodal argument mining toolkit". In *Proceedings of the 11th Workshop on Argument Mining. The 62nd Annual Meeting of the Association for Computational Linguistics (ACL 2024)*, online and in Bangkok, Thailand.
- **Eleonora Mancini**, Federico Ruggeri, Paolo Torrioni, 2024. "Multimodal Fallacy Classification in Political Debates". In *Proceedings of the 18th Conference of the European Chapter of the Association for Computational Linguistics, European Chapter of the Association for Computational Linguistics (EACL 2024)*, in St. Julian's, Malta.
- **Eleonora Mancini**, Andrea Galassi, Federico Ruggeri, Paolo Torrioni, 2024. "Disruptive Situations Detection on Public Transports through Speech Emotion Recognition". In *Intelligent Systems with Applications Journal (ISWA)*, Volume 21, Article number: 200305.
- Allegra De Filippo, Luca Giuliani, **Eleonora Mancini**, Andrea Borghesi, Paola Mello, Michela Milano, 2023. "Towards Symbiotic Creativity: A Methodological Approach to Compare Human and AI Robotic Dance Creations". In *Proceedings of the Thirty-Second International Joint Conference on Artificial Intelligence, Special Track on AI, the Arts and Creativity (IJCAI 2023)*, in Macao, China.
- Full list of publications available on [Google Scholar](#).

## SKILLS

**Programming Languages** Python | Java | C | C# | R | Scala | Prolog | SQL | MATLAB

**Version Control Systems** BitBucket | Git | GitHub | GitLab

## SOFT-SKILLS

Problem Finding | Problem Solving | Communication | Teamwork | Leadership

## EXPERIENCE

### MILA Québec AI Institute

Sep 2023 - Dec 2023

Visiting Researcher

Montréal, Canada

**Advisors:** Prof. Cem Subakan, Prof. Mirco Ravanelli

- Conducted 100+ experiments using the AudioMNIST dataset to explore **interpretability** in **speech** analysis.
- Evaluated and tested multiple **post-hoc** explainers for sound analysis, identifying and analyzing their limitations when applied to speech.
- Deployed initial prototypes of **interpretable by-design** speech architectures.

### Language Technologies Lab

Jan 2022 - Oct 2022

Research Fellow

Bologna, Italy

**Advisor:** Prof. Paolo Torrioni

- Worked on a project about **vague clauses detection** in privacy policies under the GDPR, in collaboration with the CIRSIFID department of the University of Bologna.
- Deployed a BIO tagging classifier to identify vague clauses in **privacy policies**, achieving a macro F1 score of 0.91 when classifying clauses representing categories of privacy policy items.

### i2CAT Foundation

Apr 2021 - Sep 2021

Research Intern

Barcelona, Spain

**Advisors:** Ph.D. Josep Escrig Escrig, Ph.D. Ivan Huerta Casado

- Conducted research on detecting disruptive situations, such as fights or screaming, in public transport environments by leveraging **speech emotion recognition**.
- Developed a model characterized by speaker/gender independence, robustness to noise, and the ability to handle multiple overlapping voices.
- Achieved an F1 score of over 90% even in the presence of environmental noise and multiple voices.

## University of Bologna

Sep 2021 - Mar 2026

Teaching Assistant

Bologna, Italy

- Assisted in teaching Natural Language Processing (M.Eng Artificial Intelligence), Real Time Systems for Automation (M.Eng. Automation Engineering), Python Programming (BSc Genomics), and Computer Science (BSc Mathematics). Delivered lectures, managed coursework, and provided one-on-one assistance to students.
- Facilitated AI Camp, sponsored by the Master Programmes in Artificial Intelligence 4 Careers in Europe (A.A. 22/23), providing guidance and support to participants.

## COMMUNITY SERVICE

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### ACL 2025

Student Volunteer Co-Chair

Jul 2024 - Aug 2025

Vienna, Austria

### University of Bologna

Coordinator of Alumni Association - Master's Degree in Artificial Intelligence

Jan 2022 - Mar 2026

Bologna, Italy

### LREC-COLING 2024

Student Volunteer

May 2024 - May 2024

Turin, Italy

### CLEF 2022

Student Volunteer

Sep 2022 - Sep 2022

Bologna, Italy

## PROJECTS

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### European Project H2020 - HumanE-AI-Net

Oct 2022 - Dec 2024

Researcher

Bologna, Italy

- Principal investigator in the micro-project: "Promoting Fairness and Diversity in Speech Datasets for Affective Computing", conducted with the Language Technologies Lab Department of Computer Science and Engineering (DISI), University of Bologna. Analyzed existing **speech datasets** to identify **biases** and areas lacking **diversity**, and created comprehensive **guidelines** for constructing diverse and unbiased speech datasets.
- Researcher for the micro-project: "Emotion Recognition for Human-Centered Conversational Agents", conducted with the Language Technologies Lab Department of Computer Science and Engineering (DISI), University of Bologna. Focused on developing **emotion recognition** systems to enhance human-centred **conversational agents**.

### European Project H2020 - 5GMED

Apr 2021 - Sep 2021

Researcher

Barcelona, Spain

- Researcher for the project "Ambient Intelligence - Disruptive Situations Detection on Public Transports through Speech Emotion Recognition", conducted with the Department of Distributed Artificial Intelligence (DAI), i2CAT Foundation.
- Developed a system to detect disruptive situations in public transport environments using **speech emotion recognition**.

## AWARDS

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### AIXIA 2022

Best Doctoral Consortium Paper Award

Nov 2022

Udine, Italy