

# GIUSEPPE CARRINO

PhD student in Optimization at ENS Lyon  
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## EDUCATION

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### PhD in Optimization

ENS Lyon

Mixed-precision optimization for Machine Learning.

Nov. 2025 - Ongoing

Sup. by N.Brisebarre, E.Riccietti, T.Mary

### MSc in Artificial Intelligence

University of Bologna

Thesis: "Floating-point approximations for Newton's method".

Sep. 2022 - Oct. 2025

110/110 *summa cum laude*

### BSc in Computer Science

University of Bologna

Thesis: "Infrastructure for the comparison of international newspapers".

Sep. 2019 - Jul. 2022

110/110 *summa cum laude*

## WORK EXPERIENCE

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### École normale supérieure, Lyon

Research Intern

Mar. 2025 - Jun. 2025

Sup. by E. Riccietti, T. Mary

- Floating-point **mixed precision error analysis**;
- **Newton** and **Quasi-Newton** methods for optimization.

### Amazon Business, Madrid

Software Development Engineer Intern

Sep. 2024 - Feb 2025

- Full-Stack developing using Java and React;
- Enhanced registration page achieving **+2% registrations**.

### NTNU, Gjøvik

Research Intern

Sep. 2021 - Nov. 2021

Sup. by Angelo Di Iorio, Gioele Barabucci

- Semantic analyses using **NLP** Python tools.

## TALKS

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### Numerical frugality in optimization: approximated Newton's method

Poster presentation

Poster PDF

- **SIAM Student Chapters** at Politecnico di Milano; 29 Jan. 2026
- **RT - Optimisation** at INSA Lyon; 27 Nov. 2025
- **Google M2L Summer School** at University of Split. 10 Sep. 2025

## TEACHING

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### Teaching Assistant of "Machine Learning"

ENS Lyon

M1 Course

Jan. 2026 - Apr. 2026

- Given practical lectures for  $\sim 15$  students, on theoretical and applied aspects of Machine Learning.

## PUBLICATIONS

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**Comparison of news commonality and churn in international news outlets with TARO**  
*Hypertext Conference 2023*

- Won *Ted Nelson Newcomer Award*
- DOI: <https://doi.org/10.1145/3603163.3609062>

**Publishing, linking and translating news in multilingual communities: a mirror of cultural differences?**  
*Hypertext Conference 2024*

- DOI: <https://doi.org/10.1145/3648188.3675143>

**Investigating news coverage and circulation over time in a quantitative manner: the TARO framework**  
*New Review of Hypermedia and Multimedia Journal 2024*

- DOI: <https://doi.org/10.1080/13614568.2024.2432300>

## PROJECTS

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### TARO - Tons of Articles Ready to Outline

- Developed in the context of Bachelor's internship at NTNU, expanded in subsequent works;
- Framework for the **collection** and the **comparative analysis** of *same topic* newspaper articles;
- Published and presented papers to **Hypertext** conference, winning an *ACM Award* at HT'23.
- <https://github.com/JosephCarrino/ConcepTitle>

### SAET - Self-Attentive EmoBERTa for Trigger

- University project for *Natural Language Processing* and *Ethics for Artificial Intelligence* courses;
- Implemented transformer using **BERT-based model** as a backbone, validated on **MELD dataset**;
- Assessment of models' **explainability** with explored and novel methodologies.
- [https://github.com/JosephCarrino/NLP\\_Project](https://github.com/JosephCarrino/NLP_Project)

### RagnaBot

- University project for *Fundamentals of Artificial Intelligence and Knowledge Representation* course;
- **Autonomous player** for the board game *Tablut*, ranked **2nd** at student competition;
- Used **Java's AIMA library** and **Scikit-Learn** Machine Learning models.
- <https://github.com/JosephCarrino/RagnaBot>

## TECHNICAL SKILLS

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### Programming Languages

- Python
- Java
- TypeScript

### Applied math

- Unconstrained optimization
- Linear algebra
- Error analysis

### Libraries

- NumPy
- SciPy
- PyTorch
- SpaCy
- Scrapy
- Matplotlib

LANGUAGES

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**Italian**

- Native

**English**

- Fluent

**Spanish**

- Intermediate

**French**

- Basic