

# GIUSEPPE CARRINO

PhD student in Optimization at ENS Lyon  
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## EDUCATION

<b>PhD in Optimization</b> ENS Lyon Mixed-precision optimization for Machine Learning.	<i>Nov. 2025 - Ongoing</i> <i>Sup. by N.Brisebarre, E.Riccietti, T.Mary</i>
<b>MSc in Artificial Intelligence</b> University of Bologna Thesis: "Floating-point approximations for Newton's method".	<i>Sep. 2022 - Oct. 2025</i> <i>110/110 summa cum laude</i>
<b>BSc in Computer Science</b> University of Bologna Thesis: "Infrastructure for the comparison of international newspapers".	<i>Sep. 2019 - Jul. 2022</i> <i>110/110 summa cum laude</i>

## WORK EXPERIENCE

<b>École normale supérieure, Lyon</b> <i>Research Intern</i>	<i>Mar. 2025 - Jun. 2025</i> <i>Sup. by E. Riccietti, T. Mary</i>
· Floating-point <b>mixed precision error analysis</b> ;	
· <b>Newton</b> and <b>Quasi-Newton</b> methods for optimization.	
<b>Amazon Business, Madrid</b> <i>Software Development Engineer Intern</i>	<i>Sep. 2024 - Feb 2025</i>
· Full-Stack developing using Java and React;	
· Enhanced registration page achieving <b>+2% registrations</b> .	
<b>NTNU, Gjøvik</b> <i>Research Intern</i>	<i>Sep. 2021 - Nov. 2021</i> <i>Sup. by Angelo Di Iorio, Gioele Barabucci</i>
· Semantic analyses using <b>NLP</b> Python tools.	

## TALKS

<b>Numerical frugality in optimization: approximated Newton's method</b> <i>Poster presentation</i>	<i>Poster PDF</i>
· <b>SIAM Student Chapters</b> at Politecnico di Milano;	<i>29 Jan. 2026</i>
· <b>RT - Optimisation</b> at INSA Lyon;	<i>27 Nov. 2025</i>
· <b>Google M2L Summer School</b> at University of Split.	<i>10 Sep. 2025</i>

## TEACHING

<b>Teaching Assistant of "Machine Learning"</b> <i>ENS Lyon</i>	<i>M1 Course</i> <i>Jan. 2026 - Apr. 2026</i>
· Given practical lectures for ∼ 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