



## Alex R. Atrio

PhD in NLP

[alexratr.io](https://alexratr.io)

### SOFTWARE

<b>Programming</b>	Python Prolog
<b>Toolkits</b>	Pytorch Tensorflow
<b>Visualization</b>	Matplotlib Pandas
<b>OS</b>	Linux Windows
<b>Misc.</b>	LaTeX Git

### LANGUAGES

<b>English</b>	C2 - Fluent
<b>French</b>	C1 - Fluent
<b>Spanish</b>	Native
<b>Catalan</b>	Native

# PhD in NLP

FR/ENG/ESP/CAT

PhD graduate from EPFL, I am highly qualified and have extensive expertise in managing collaborative projects in Natural Language Processing (NLP). My experience spans various areas of NLP, from strategy planning, training, optimization to analysis of neural models.

**Quick comprehension | Sense of analysis and organization**

**Flexible | Initiative spirit | Autonomous | Motivated | Open**

### SKILLS

- ▲ Expertise in NLP / Machine Learning research projects
- ▲ Collaboration on practical projects with clients
- ▲ Neural machine translation
- ▲ Text generation with language models
- ▲ Writing and synthesis of results, for the publication of scientific articles and presentation at conferences

### PROFESSIONAL EXPERIENCE

- 2019 - 2023 **PhD student & research assistant**  
Haute École d'Ingénierie et de Gestion du Canton de Vaud & École Polytechnique Fédérale de Lausanne
- ▲ Conduct research in various NLP projects at HEIG-VD, while pursuing a doctorate at EPFL. Management of **responsibilities** between both roles
  - ▲ Supervise the entire **life cycle** of NLP projects: from data collection, definition of architecture and hyperparameters, to evaluation and analysis of neural models
  - ▲ **Python**, with standard machine learning libraries using **PyTorch**
  - ▲ Expertise in the latest **research** in NLP
  - ▲ Engaged in collaborative and multidisciplinary **teams**
  - ▲ Strong **organizational** and **communication** skills, articulating complex ideas in clear terms in NLP projects
- 2020 & 2022 **Teaching assistant**  
Haute École d'Ingénierie et de Gestion du Canton de Vaud
- ▲ Two third-year NLP courses in French
  - ▲ Guide students according to requests mentioned in class
  - ▲ Review and provide constructive feedback regarding regular practical laboratory work

## CONTACT



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[/alexratrio](https://www.linkedin.com/in/alexratrio)



[/Àlex R. Atrio](#)

Spanish (EU) nationality

Swiss Permit B



## INTERESTS

Functional and active  
international team

Projects with state-of-the-art  
technology

Open, friendly and agile  
working environment

Development prospects

Continuous learning  
opportunities

## REFERENCE

### Andrei Popescu-Belis

Professor of computer science at  
HEIG-VD. Senior scientist at EPFL

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Yverdon, Switzerland

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## EDUCATION

- 2023 **PhD in NLP**  
École Polytechnique Fédérale de Lausanne (EPFL)  
Thesis: Regularization Techniques for Low-Resource  
Machine Translation  
Supervisors: Andrei Popescu-Belis et Jean-Marc Odobez
- 2018 **Master in Cognitive Sciences**  
University Pompeu Fabra et University of Barcelona  
Thesis: MT Reordering as Preprocessing for Cross-Lingual  
Sentiment Analysis  
Supervisors: Toni Badia et Jeremy Barnes
- 2016 **Bachelor in Philosophy**  
University of Barcelona

## PUBLICATIONS

I have authored research covering various areas in NLP. For a comprehensive  
list of my publications, please visit my [homepage](#)

- ▲ **Atrio, À.R.**, Popescu-Belis, A. (2022). *On the Interaction of Regularization Factors in Low-resource Neural Machine Translation* (EAMT 22)
- ▲ **Atrio, À.R.**, Popescu-Belis, A. (2021). *Small Batch Sizes Improve Training of Low-resource Neural MT* (ICON 21)
- ▲ **Atrio, À.R.**, Badia, T., Barnes, J. (2019). *On the Effect of Word Order on Cross-lingual Sentiment Analysis* (SEPLN 19). **Best paper award**

## INDUSTRY-DRIVEN NLP PROJECTS

During my PhD, I also collaborated simultaneously on more applied projects  
with external partners:

- 2022-2023 **UNISUB – Unsupervised Neural Machine Translation**  
Armasuisse - Swiss Federal Armaments Office
- ▲ Contribute as a senior team member to the project
  - ▲ Focus on end-to-end optimization through adaptive scheduling of training tasks
- 2020-2021 **FamilyMT – Multilingual Neural MT for Language Families**  
Armasuisse - Swiss Federal Armaments Office
- ▲ Contribute as a senior team member to the project
  - ▲ Design systems for closely related source languages
- 2019-2020 **Digital Lyric – Computer-assisted Poetic Creation**  
Swiss National Science Foundation Agora
- ▲ Collaboration and development of an interactive poetry generation system with user-defined constraints
  - ▲ Successfully showcased at public events