



**Alex R. Atrio**  
PhD in NLP

## Summary

Highly skilled PhD graduate from EPFL with expertise in leading collaborative end-to-end Natural Language Processing projects.

Experienced in a variety of NLP domains. Designing strategies, training, optimizing, analyzing, and evaluating neural models.

## Skills

<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

## Professional Experience

### 2019 - 2023 **Research assistant and PhD in NLP student**

Haute École d'Ingénierie et de Gestion du Canton de Vaud & École Polytechnique Fédérale de Lausanne, Switzerland

- Conducted research on various NLP projects at HEIG-VD while pursuing a PhD at EPFL, managing **responsibilities** between roles.
- Led end-to-end Machine Learning/AI projects, specializing in advanced techniques in **Neural Machine Translation** and Neural Text Generation with **Language Models**.
- Oversaw the entire **project life cycle**: from data gathering and cleaning to training Neural models, making architecture and hyper-parameter decisions, considering technical training aspects, and conducting performance evaluation and analysis.
- Extensively used **Python**, with ML/NLP toolkits like **PyTorch**, relevant data processing **tools** such as Pandas, and common visualization tools.
- Expertise with the latest Neural Machine Translation **research** and Neural Text Generation with Language Models, and other parts of NLP.
- Engaged in collaborative **teams** with diverse members, assuming a senior role relative to engineers and reporting to a supervisor.
- Demonstrated strong **organizational** and **communication** skills by articulating complex ideas in clear terms within NLP projects.

### 2020 & 2022 **Teaching Assistant**

Haute École d'Ingénierie et de Gestion du Canton de Vaud

I served as the teaching assistant for two NLP courses (3rd-year bachelor in computer science, conducted in French). Responsibilities encompassed guiding students through in-class queries, as well as reviewing and offering constructive feedback on regular lab exercises.

## Selected Publications

- I have authored research papers covering diverse aspects of NLP: for a comprehensive list of 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**.

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## Contact



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



[/Àlex R. Atrio](#)

## Education

- 2019 - 2023 **Ph.D. in Natural Language Processing**  
**École Polytechnique Fédérale de Lausanne (EPFL) & HEIG-VD**  
Thesis: Regularization Techniques for Low-Resource Machine Translation.  
Supervisors: Andrei Popescu-Belis & Jean-Marc Odobez.
- 2017 - 2018 **Master in Cognitive Science and Language**  
**University Pompeu Fabra & University of Barcelona, Spain**  
GPA: 8.2/10  
Thesis: MT Reordering as Preprocessing for Cross-Lingual Sentiment Analysis.
- 2011 - 2016 **Bachelor in Philosophy**  
**University of Barcelona**  
GPA: 7.6/10

## Languages

English	Fluent
French	Fluent
Spanish	Native
Catalan	Native
Galician	Fluent

## Reference

### Andrei Popescu-Belis

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

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## Industry-Driven NLP Projects

- 2022 - 2023 **UNISUB - Unsupervised Neural Machine Translation**  
Contributed as a senior team member to the Armasuisse-funded project, UNISUB. Focused on optimizing end-to-end unsupervised neural machine translation through adaptive scheduling of training tasks
- 2020 - 2021 **FamilyMT - Multilingual Neural MT for Language Families**  
Contributed as a senior team member to the Armasuisse-funded project, FamilyMT. Played a key role in designing systems for closely related source languages within the same family
- 2019 - 2020 **Digital Lyric - Computer-assisted Poetic Creation**  
Contributed to an SNSF Agora program-supported project, developing an interactive poem generation system with user-defined constraints. Successfully showcased at public exhibitions

## Interests

- Cross-cultural and functional international team
- Worldwide implementation projects with state-of-the-art technology
- Exciting tasks in an open, friendly, and agile workenvironment
- Attractive remuneration and social benefits
- Good development prospects, extensive training opportunities, and an active global community.