



Alex R. Atrio

Senior Deep
Learning Scientist
alexratrio.github.io

SOFTWARE

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

LANGUAGES

English	C2
French	C1
Spanish	Native
Catalan	Native

Senior Deep Learning Scientist

FR/ENG/ESP/CAT

Senior Deep Learning Scientist @ Pi School, Rome. 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.

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

- 2024 - ... **Senior Deep Learning Scientist**
[Pi School](#), Rome (Italy)
- ▲ I work in [LLM4EO](#), a 15-month, 1M€ project to develop an open-source LLM for Earth observation for [Φ-lab](#), the Earth Observation innovation lab at the [European Space Agency](#).
 - ▲ Work on the project involves data gathering, continued pre-training, instruction fine-tuning on relevant downstream tasks, alignment, and retrieval augmented generation.
- 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 Vaud
- ▲ Two third-year NLP courses in French. Guiding students in class and reviewing regular practical laboratory work.

CONTACT



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Bains, Vaud, Switzerland



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[/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
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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

SELECTED 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 at EPFL, 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