Àlex R. Atrio

alexratrio.github.io

PROGRAMMING

Code | Python

Toolkits | Pytorch, Tensorflow

Visual. | Matplotlib

Data | Pandas, NLTK

OS | Linux, Windows

Misc. | LaTeX, Git

LANGUAGES

French | C1

English | C2

Spanish | **Native**

Catalan | Native

REFERENCE

Dr. Andrei Popescu-Belis

Professor of computational science at HEIG-VD
Senior scientist at EPFL

andrei DOT popescu DASH belis AT heig-vd.ch
+41 (0)24 557 62 99

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 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**
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 common machine learning libraries like **PyTorch**, Pandas
- 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
- Guide students according to requests mentioned in class
- Review and provide constructive feedback regarding regular practical laboratory work

PERSONAL DATA

Spanish nationality

Residing in Switzerland - Permit B

Born May 2, 1993

CONTACTS

Chemin de Sous-Bois 10
1400 Yverdon-les-Bains

+41 (0) 76 229 95 08

alexratrio@gmail.com

INTERESTS

Running

Guitar

Reading – history

PROFESSIONAL ASPIRATIONS

Functional and active international team

Projects with state-of-the-art technology

Open, friendly and agile working environment

Development prospects

Continuous Learning Opportunities

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

2022-2023 **UNISUB – Unsupervised Neural Machine Translatio**
Armasuisse - 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 - 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