# Ilaria Salogni

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I am a final-year MSc student in Natural Language Processing. My research goal is discovering how (and to what extent) linguistic information is used by LLMs to carry out a specific task, leveraging linguistic analysis and statistical modeling. I maintain a list of my publications and research projects on my page.

Major Interests: Explainability; Bertology; Low-resources languages Other Interests: Machine Translation; Multilinguality; Linguistic continuum

#### **EDUCATION**

Present | University of Pisa, PISA, Italy

Sept 2021 MSc in Human Language Technologies

Major: NLP, Computational Linguistics

Thesis (April 2024): "Hierarchical Quantification: a novel approach to cause of death prevalence

estimation in Verbal Autopsies datasets" | Advisor: Fabrizio Sebastiani

Sept 2017

Apr 2021 University of Pavia, PAVIA, Italy

Bachelor of Arts ("Lettere moderne")

Major: Linguistics

Thesis: "Sociolinguistics of the Italian colonial context: interlingua and

lexical borrowings in Amharic" | Advisor: Ilaria Fiorentini

#### **PUBLICATIONS**

2023 Salogni Ilaria "Salogni at GeoLingIt: Geolocalization by Fine-tuning BERT" in Proceedings of the Eighth Evaluation Campaign of Natural Language Processing and Speech Tools for Italian. Final Workshop (EVALITA 2023) Parma, Italy, September 7th-8th, 2023 [PDF]

#### **EXPERIENCE**

Research internship Sept 2023 to Feb 2024

National Research Council (ISTI-CNR) of Pisa, PISA, Italy

- Data sourcing and visualization of text biomedical datasets
- Definition of a NLP system to leverage hierarchical labels to classify textual inputs in prior shift setting

#### **PROJECTS**

Through hands-on project I developed strong analytical skills for technical and linguistic issues and to evaluate a range of deep learning models. Among the most relevant ones:

- o Geolocating (regression task) sequences exhibiting non-standard language varieties relying solely on linguistic content by fine-tuning two BERT-based and a RoBERTa-based model (Github)
- o A quantitative analysis in R of the morphological complexity using French verbal system data (Github)
- o Revision of the semi-automatic annotation of the UD-Pipe model on an Italian corpus, to assess domain-adaptation issues

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### PROGRAMMING AND DATA ANALYSIS SKILLS

• Programming Languages: Python, R

SW/ Tools: Git, GitHub, LATEX, Google Colab, Jupyter

• Relevant Libraries: TensorFlow, PyTorch, Keras, NumPy, Pandas, Scikit Learn, ggplot

## LANGUAGE SKILLS:

Native Italian speaker

Fluent written and spoken English (IELTS band 8, Feb. 2024).

Fluent written and spoken Spanish

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