

# Giorgos Vernikos

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🔍 [google scholar](#) • 🏠 [github](#) • [in linkedin](#) • 🐦 [twitter](#)

## Research Interests

multilingual & monolingual natural language processing, large language models, machine translation modeling & evaluation, domain adaptation, subword segmentation algorithms, active learning

## Professional Experience

### Research Intern

Google, Google Assistant

Zurich, Switzerland

10/2022–02/2023

Research on improving the predictions of LLMs using smaller models.

Supervisors: [Eric Malmi](#), [Jakub Adamek](#) and [Aliaksei Severyn](#)

### Applied Scientist Intern

Amazon Web Services, AI Labs

Santa Clara, CA, USA

04/2022–08/2022

Research on document-level machine translation evaluation.

Supervisors: [Brian Thompson](#), [Prashant Mathur](#) and [Marcello Federico](#)

### Research Assistant

HEIG-VD, Institute for Information and Communication Technologies (IICT)

Yverdon-Les-Bains, Switzerland

08/2020–Present

Contribution to projects:

- FamilyMT: Multilingual NMT for families of languages and dialects, supported by Armasuisse
- UniSub: Unsupervised NMT with innovative multilingual subword models, supported by Armasuisse

### Machine Learning Engineer

DeepSea Technologies, AI Research Department

Pireaus, Greece

09/2018–02/2020

### Compulsory Military Service

Communications and Network Center

12/2017–8/2018

## Education

### Ph.D candidate

École Polytechnique Fédérale de Lausanne (EPFL), Electrical Engineering (EDEE)

Lausanne, Switzerland

08/2020–Present

- Supervisor: Prof. [Andrei Popescu-Belis](#)
- Graduation (expected): January 2025

### Master of Science (MSc) in Data Science and Machine Learning

National Technical University of Athens (NTUA)

Athens, Greece

11/2018–07/2020

- GPA: 9.22/10 (excellent)
- Thesis: *Adversarial Fine-tuning of Pretrained Language Models*
- Supervisors: Prof. [Andreas Stafylopatis](#) and Dr. [Georgios Siolas](#)

### Erasmus exchange student

Universidad Carlos III de Madrid (UC3M), School of Electrical Engineering

Madrid, Spain

01/2016–06/2016

### BEng & MEng in Electrical and Computer Engineering

National Technical University of Athens (NTUA)

Athens, Greece

10/2011–11/2017

- GPA: 8.02/10 (top 15% of class)
- Thesis: *Text-content based analysis of emotions: A Comparative Study of Machine Learning Algorithms and Data Stream Storage Techniques*
- Supervisor: Prof. [Iakovos Venieris](#)

## Teaching & other Academic Experience

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### Teaching

Analysis of Text Data (AnTeDe) (2022, 2023, 2024) 2022–Present

### Reviewer

ACL, EMNLP, NAACL, EACL, ARR, DADC, HCRL 2019–Present

### Program Committee

AAAI 2024 Workshop on Human-Centric Representation Learning ([HCRL 2023](#))

## Invited talks

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- MT Reading group, Microsoft / virtual, on-line 02/2024
- [ELLIS & Unbabel Seminars](#), Lisbon ELLIS Unit (LUMILIS) and Unbabel / virtual, on-line 02/2024
- [Workshop on Natural Language Processing](#), Archimedes Research Center / Athens, Greece 07/2023
- [ELLIS & Unbabel Seminars](#), Lisbon ELLIS Unit (LUMILIS) and Unbabel / virtual, on-line 10/2022

## Publications

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- [1] [Vernikos, G.](#), and Popescu-Belis, A. (2024). *Don't Rank, Combine! Combining Machine Translation Hypotheses Using Quality Estimation*. Under submission. [\[paper\]](#) [\[code\]](#)
- [2] [Vernikos, G.](#), Bražinskas, A., Adamek, J., Mallinson, J., Severyn, A., and Malmi, E. (2023). *Small Language Models Improve Giants by Rewriting Their Outputs*. EACL 2024 (oral). [\[paper\]](#) [\[code\]](#)
- [3] Wolleb, B., Silvestri, R., [Vernikos, G.](#), Dolamic, L. and Popescu-Belis, A. (2023). *Assessing the Importance of Frequency versus Compositionality for Subword-based Tokenization in NMT*. EAMT 2023. [\[paper\]](#) [\[code\]](#)
- [4] Popescu-belis, A., Atrio, À.R., Bernath, B., Boisson, E., Ferrari, T., Theimer-lienhard, X., and [Vernikos, G.](#) (2023). *GPoeT: a Language Model Trained for Rhyme Generation on Synthetic Data*. LaTeCH-CLfL 2023 (oral). [\[paper\]](#) [\[code\]](#)
- [5] [Vernikos, G.](#), Thompson, B., Mathur, P. and Federico, M. (2022). *Embarrassingly Easy Document-Level MT Metrics: How to Convert Any Pretrained Metric Into a Document-Level Metric*. WMT22 (oral). [\[paper\]](#) [\[code\]](#)
- [6] [Vernikos, G.](#), and Popescu-Belis, A. (2021). *Subword Mapping and Anchoring across Languages*. EMNLP 2021 Findings. Presented at WMT21 (oral). [\[paper\]](#) [\[code\]](#)
- [7] Margatina, K., [Vernikos, G.](#), Barrault, L., and Aletras, N. (2021). *Active Learning by Acquiring Contrastive Examples*. EMNLP 2021 (oral). [\[paper\]](#) [\[code\]](#)
- [8] Atrio, À.R., Luthier, G., Fahy, A., [Vernikos, G.](#), Popescu-Belis, A. and Dolamic, L. (2021). *The IICT-Yverdon System for the WMT 2021 Unsupervised MT and Very Low Resource Supervised MT Task*. WMT21. [\[paper\]](#)
- [9] [Vernikos, G.](#), Margatina, K., Chronopoulou, A., and Androutsopoulos, I. (2020). *Domain Adversarial Fine-Tuning as an Effective Regularizer*. EMNLP 2020 Findings. Presented at SustaiNLP (oral). [\[paper\]](#) [\[code\]](#)

## Honors and awards

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- **Facebook Scholarship for Attendance at EurNLP 2019**  
Recipient of travel grant in order to attend the EurNLP summit in London, UK.
- **Nationwide University Entrance Examination**

Scored 19.398/20 on the national qualification exams (top 1% nationwide).

## Programming skills

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- **Languages:** Python, R, C, Matlab, Bash, Assembly, SQL
- **ML Frameworks:** Pytorch, Tensorflow, Keras, HuggingFace, scikit-learn
- **Big Data Tools:** Apache Storm, Apache Spark, Apache Flume
- **Other:**  $\text{\LaTeX}$ , Git, Flask

## Languages

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Greek (native), English (C2), Spanish (B2), German (B1)