

# Giorgos Vernikos

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🔍 google scholar • 🐙 github • in linkedin • 🐦 twitter

## Research Interests

machine learning, deep learning, transfer learning, multilingual & monolingual natural language processing, language model fine-tuning, machine translation, active learning, representation learning, subword segmentation algorithms

## Education

### Ph.D candidate

Lausanne, Switzerland

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

08/2020–Present

- Supervisor: Prof. [Andrei Popescu-Belis](#)
- Focus: multilingual natural language processing, unsupervised & supervised machine translation, subword segmentation algorithms

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

Athens, Greece

National Technical University of Athens (NTUA)

11/2018–07/2020

- GPA: 9.22/10 (excellent)
- Relevant Coursework: Data Mining, Machine Learning, Deep Learning
- Thesis: Adversarial Fine-tuning of Pretrained Language Models
- Supervisors: Prof. [Andreas Stafylopatis](#) and Dr. [Georgios Siolas](#)

### BEng & MEng in Electrical and Computer Engineering

Athens, Greece

National Technical University of Athens (NTUA)

10/2011–11/2017

- GPA: 8.02/10 (top 15% of class)
- Relevant Coursework: Pattern Recognition, Neural Networks, Computer Vision, Digital Signal Processing, Neurofuzzy Industrial and Robot Control
- Thesis: Text-content based analysis of emotions: A Comparative Study of Machine Learning Algorithms and Data Stream Storage Techniques
- Supervisor: Prof. [Iakovos Venieris](#)

### Erasmus exchange student

Madrid, Spain

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

01/2016–06/2016

- Relevant Coursework: Artificial Intelligence, Medical Image Processing

## Professional and Research Experience

### Research Assistant

Yverdon-Les-Bains, Switzerland

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

08/2020–Present

- Project [DOMAT](#): On-demand Knowledge for Document-level Machine Translation, supported by SNSF
- Project FamilyMT: Multilingual NMT for families of languages and dialects, supported by Armasuisse

### Machine Learning Engineer

Pireaus, Greece

DeepSea Technologies, AI Research Department

09/2018–02/2020

- Worked with real-world noisy and missing data from sensory input.
- Researched objectives for representation learning and models that could handle very long-range dependencies.
- Implemented neural networks for vessel monitoring and cost optimization and deployed them in production.

**Compulsory Military Service**  
*Communications and Network Center*

12/2017–8/2018

**Private Tutor**  
*Freelancer*

**Athens, Greece**  
09/2011–06/2017

- Taught high-school level Mathematics and Physics

## Publications

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**Vernikos, G.**, and Popescu-Belis, A. *Subword Mapping and Anchoring across Languages*. EMNLP 2021 (Findings). Presented at the Sixth Conference on Machine Translation (WMT21). [\[paper\]](#) [\[code\]](#)

Margatina, K., **Vernikos, G.**, Barrault, L., and Aletras, N. *Active Learning by Acquiring Contrastive Examples*. EMNLP 2021 (oral). [\[paper\]](#) [\[code\]](#)

Atrio, À.R., Luthier, G., Fahy, A., **Vernikos, G.**, Popescu-Belis, A. and Dolamic, L. *The IICT-Yverdon System for the WMT 2021 Unsupervised MT and Very Low Resource Supervised MT Task*. Conference on Machine Translation (WMT21). [\[paper\]](#)

**Vernikos, G.**, Margatina, K., Chronopoulou, A., and Androutsopoulos, I. *Domain Adversarial Fine-Tuning as an Effective Regularizer*. EMNLP 2020 (Findings). Presented at the First Workshop on Simple and Efficient Natural Language Processing (SustaiNLP). [\[paper\]](#) [\[code\]](#)

## 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).

## Attended seminars

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- Lisbon Machine Learning School ([LxMLS](#)), virtual, on-line
- Athens Natural Language Processing Summer School ([AthNLP](#)), Athens, Greece

## Programming skills

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

## Languages

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