

Alexandra Chronopoulou

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Research Interests

parameter-efficient fine-tuning, modular representation learning, domain adaptation, reasoning, machine translation & multilingual natural language processing, unsupervised & low-resource learning

Professional Experience

Google <i>Research Scientist</i> I am working on improving Gemini as a member of Manaal Faruqui 's team	New York, NY, USA 01/2024-present
Google <i>Research Scientist Intern</i> Research on multilingual NLP using large language models (Google DeepMind) Supervisors: Sebastian Ruder , Priyanka Agrawal	Berlin, Germany 04/2023-07/2023
Amazon <i>Applied Scientist Intern</i> Research on isochronous speech translation (Amazon AI) Supervisors: Prashant Mathur , Brian Thompson , Marcello Federico	Santa Clara, CA, USA 08/2022-12/2022
Allen Institute for AI <i>Research Scientist Intern</i> Research on arithmetic (weight-space) composition of adapters (AllenNLP team) Supervisors: Jesse Dodge , Matthew E. Peters	Seattle, WA, USA (remote) 05/2022-08/2022
Allen Institute for AI <i>Research Scientist Intern</i> Research on hierarchical adapters for domain adaptation (AllenNLP team) Supervisors: Jesse Dodge , Matthew E. Peters	Seattle, WA, USA (remote) 07/2021-01/2022
Behavioral Signal Technologies Inc. <i>Machine Learning Engineer</i> Basic emotion recognition from conversational data	Los Angeles, CA, USA (remote) 11/2018-07/2019
NOKIA R&D <i>Software Engineer Intern</i> Prediction of code fault-proneness based on data from internal team projects	Athens, Greece 07/2017-01/2018

Education

PhD in Computer Science <i>Ludwig Maximilian University of Munich</i> <ul style="list-style-type: none">○ Natural Language Processing Group (CIS)○ Supervisor: Alexander Fraser○ Thesis: "Efficient Multilingual and Domain Adaptation of Language Models under Resource Constraints"	Munich, Germany 09/2019-present
Visiting Student, MEng <i>Polytechnic University of Catalonia (UPC)</i>	Barcelona, Spain 01/2016-06/2016
Diploma (BEng & MEng) in Electrical and Computer Engineering <i>National Technical University of Athens</i> <ul style="list-style-type: none">○ GPA : 8.0/10 (top 15%)○ Thesis : "Transfer Learning with Deep Neural Networks for Sentiment Analysis and Semantic Modeling"	Athens, Greece 09/2012-02/2019

Publications

- [1] Reid, M., ..., **Chronopoulou, A.**, et al. (Gemini Team Google). (2024). Gemini 1.5: Unlocking multimodal understanding across millions of tokens of context. Technical report. [\[paper\]](#)
- [2] **Chronopoulou, A.**, Pfeiffer, J., Maynez, J., Wang, X., Ruder, S., Agrawal, P. (2023). Language and Task Arithmetic with Parameter-Efficient Layers for Zero-Shot Summarization. arXiv pre-print. [\[paper\]](#)
- [3] Agarwal, M., ..., **Chronopoulou, A.**, et al. (2023). Findings of the IWSLT 2023 Evaluation Campaign. (50+ authors). IWSLT 2023. [\[paper\]](#)
- [4] Liu, Y., **Chronopoulou, A.**, Schütze, H., Fraser, A. (2023). On the Copying Problem of Unsupervised NMT: A Training Schedule with a Language Discriminator Loss. IWSLT 2023. [\[paper\]](#)
- [5] Lai, W., **Chronopoulou, A.**, Fraser, A. (2023). Mitigating Data Imbalance and Representation Degeneration in Multilingual Machine Translation. EMNLP 2023 Findings. [\[paper\]](#)
- [6] Pal, P., Thompson, B., Virkar, Y., Mathur, P., **Chronopoulou, A.**, Federico, M. (2023). Improving Isochronous Machine Translation with Target Factors and Auxiliary Counters. INTERSPEECH 2023. [\[paper\]](#)
- [7] **Chronopoulou, A.**, Thompson, B., Mathur, P., Virkar, Y., Lakew, S. M., Federico, M. (2023). Jointly Optimizing Translations and Speech Timing to Improve Isochrony in Automatic Dubbing. arXiv pre-print. [\[paper\]](#)
- [8] **Chronopoulou, A.**, Peters, M., Fraser, A., Dodge, J. (2023). AdapterSoup: Weight Averaging to Improve Generalization of Pretrained Language Models. EACL 2023 Findings. [\[paper\]](#)
- [9] **Chronopoulou, A.**, Stojanovski, D., Fraser, A. (2023). Language-Family Adapters for Low-Resource Multilingual Neural Machine Translation. LoResMT 2023. [\[paper\]](#)
- [10] Lai, W., **Chronopoulou, A.**, Fraser, A. (2022). *m⁴Adapter*: Multilingual Multi-Domain Adaptation for Machine Translation with a Meta-Adapter. EMNLP 2022 Findings. [\[paper\]](#) [\[code\]](#)
- [11] **Chronopoulou, A.**, Peters, M., Dodge, J. (2022). Efficient Hierarchical Domain Adaptation for Pretrained Language Models. NAACL 2022. [\[paper\]](#) [\[code\]](#)
- [12] **Chronopoulou, A.**, Stojanovski, D., Fraser, A. (2021). Improving the Lexical Ability of Pretrained Language Models for Unsupervised Neural Machine Translation. NAACL 2021. [\[paper\]](#) [\[code\]](#)
- [13] **Chronopoulou, A.**, Stojanovski, D., Fraser, A. (2020). Reusing a Pretrained Language Model on Languages with Limited Corpora for Unsupervised Neural Machine Translation. EMNLP 2020. [\[paper\]](#) [\[code\]](#)
- [14] Vernikos, G., Margatina, K., **Chronopoulou, A.**, Androutsopoulos, I. (2020). Domain Adversarial Fine-Tuning as an Effective Regularizer. EMNLP 2020 Findings. [\[paper\]](#) [\[code\]](#)
- [15] **Chronopoulou, A.**, Stojanovski, D., Hangya, V., Fraser, A. (2020). The LMU Munich System for the WMT 2020 Unsupervised Machine Translation Shared Task. WMT 2020. [\[paper\]](#) [\[code\]](#)
- [16] **Chronopoulou, A.**, Baziotis, C., Potamianos, A. (2019). An Embarrassingly Simple Approach for Transfer Learning from Pretrained Language Models. NAACL 2019. [\[paper\]](#) [\[code\]](#)
- [17] **Chronopoulou, A.***, Margatina, K.*, Baziotis, C., Potamianos, A. (2018). NTUA-SLP at IEST 2018: Ensemble of Neural Transfer Methods for Implicit Emotion Classification. WASSA 2018. [\[paper\]](#) [\[code\]](#)
- [18] Baziotis, C., Athanasiou, N., **Chronopoulou, A.**, Kolovou, A., Paraskevopoulos, G., Ellinas, N., Narayanan, S., Potamianos, A. (2018). NTUA-SLP at SemEval-2018 Task 1: Predicting Affective Content in Tweets with Deep Attentive RNNs and Transfer Learning. SemEval 2018. [\[paper\]](#) [\[code\]](#)

Invited Talks

- Lilt AI:** Efficient hierarchical domain adaptation of pretrained language models ([slides](#)) Sep 2022
- ELRC Workshop on LLMs:** Language-family adapters for multilingual machine translation ([slides](#)) Jun 2022

Teaching & Other Academic Experience

- **Program Committee**

The 20th International Conference on Spoken Language Translation ([IWSLT 2023](#))
8th Workshop on Representation Learning for NLP ([RepL4NLP 2023](#))

- **Teaching**

Supervision of BA/MA theses at LMU Munich (2019-present)
Tutor on courses: Information Extraction, Machine Translation at LMU Munich (2019-present)

- **Reviewer**

ACL, EMNLP, NAACL, EACL, WMT, IWSLT, RepL4NLP (2018-present)

Honors & Awards

- **Competitions**

Ranked 1st in [WMT 2020 Unsupervised Task](#). The task was translation for German-Sorbian in both directions.
Ranked 1st at the [SemEval 2018 Task1E: Affect in Tweets](#).

- **Awards**

Travel grant from Facebook to attend inaugural EurNLP 2019 summit in London, UK.
Awarded a scholarship from the [Hellenic Artificial Intelligence Society](#) to attend [AthNLP 2019](#) in Athens, Greece.
Awarded an [ACM-W scholarship](#) to attend [NAACL 2019](#) in Minneapolis, MN.
Erasmus Exchange Student Program (01/2016/-06/2016) to visit UPC in Barcelona, Spain.

Programming Skills

Languages: Python, Bash (excellent) / C, C++, Matlab, SQL, Java (familiar with)

ML & NLP frameworks: PyTorch, Jax, Fairseq, HuggingFace, Tensorflow, Keras, AllenNLP

Languages

Greek (*Native*), English (*C2*), French (*C2*), Spanish (*B2*), German (*B1*)