Alexandra Chronopoulou

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Research Interests

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

Education

PhD in Computer Science

Munich, Germany

Ludwig Maximilian University of Munich

09/2019-present

Natural Language Processing Group (CIS)

o Supervisor: Alexander Fraser

o Thesis: "Efficient Multilingual and Domain Adaptation of Language Models under Resource Constraints"

Expected Graduation: January 2024

Visiting Student, MEng

Barcelona, Spain

Polytechnic University of Catalonia (UPC)

01/2016-06/2016

Diploma (BEng & MEng) in Electrical and Computer Engineering

Athens, Greece

National Technical University of Athens

09/2012-02/2019

o GPA: 8.0/10 (top 15%)

o Thesis: "Transfer Learning with Deep Neural Networks for Sentiment Analysis and Semantic Modeling"

o Thesis Supervisor: Alexandros Potamianos

Professional Experience

Google DeepMind

Berlin, Germany

Research Scientist Intern

04/2023-07/2023

Research on multilingual NLP using large language models

Supervisors: Sebastian Ruder, Priyanka Agrawal

Amazon Al

Santa Clara, CA, USA

Applied Scientist Intern

08/2022-12/2022

Research on isochronous speech translation (Amazon Translate team) Supervisors: Prashant Mathur, Brian Thompson, Marcello Federico

Allen Institute for Artificial Intelligence

Seattle, WA, USA (remote)

Research Scientist Intern

05/2022-08/2022

Research on arithmetic (weight-space) composition of adapters (AllenNLP team)

Supervisors: Jesse Dodge, Matthew E. Peters

Allen Institute for Artificial Intelligence

Seattle, WA, USA (remote)

Research Scientist Intern

07/2021-01/2022

Research on hierarchical adapters for domain adaptation (AllenNLP team)

Supervisors: Jesse Dodge, Matthew E. Peters

Behavioral Signal Technologies Inc.

Los Angeles, CA, USA (remote)

Machine Learning Engineer

11/2018-07/2019

Basic emotion recognition from conversational data

NOKIA R&D

Athens, Greece

Software Engineer Intern

07/2017-01/2018

Prediction of code fault-proneness based on data from internal team projects

Publications

- [1] Agarwal, M., .., Chronopoulou, A., et al. (2023). Findings of the IWSLT 2023 Evaluation Campaign. (50+ authors). IWSLT 2023. [paper]
- [2] 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]
- [3] Lai, W., Chronopoulou, A., Fraser, A. (2023). Mitigating Data Imbalance and Representation Degeneration in Multilingual Machine Translation. EMNLP 2023 Findings. [paper]
- [4] 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]
- [5] 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]
- [6] **Chronopoulou, A.**, Peters, M., Fraser, A., Dodge, J. (2023). AdapterSoup: Weight Averaging to Improve Generalization of Pretrained Language Models. EACL 2023 Findings. [paper]
- [7] **Chronopoulou, A.**, Stojanovski, D., Fraser, A. (2023). Language-Family Adapters for Low-Resource Multilingual Neural Machine Translation. LoResMT 2023. [paper]
- [8] Lai, W., **Chronopoulou, A.**, Fraser, A. (2022). $m^4Adapter$: Multilingual Multi-Domain Adaptation for Machine Translation with a Meta-Adapter. EMNLP 2022 Findings. [paper] [code]
- [9] Chronopoulou, A., Peters, M., Dodge, J. (2022). Efficient Hierarchical Domain Adaptation for Pretrained Language Models. NAACL 2022. [paper] [code]
- [10] Chronopoulou, A., Stojanovski, D., Fraser, A. (2021). Improving the Lexical Ability of Pretrained Language Models for Unsupervised Neural Machine Translation. NAACL 2021. [paper] [code]
- [11] 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]
- [12] Vernikos, G., Margatina, K., **Chronopoulou, A.**, Androutsopoulos, I. (2020). Domain Adversarial Fine-Tuning as an Effective Regularizer. EMNLP 2020 Findings. [paper] [code]
- [13] **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]
- [14] Chronopoulou, A., Baziotis, C., Potamianos, A. (2019). An Embarrassingly Simple Approach for Transfer Learning from Pretrained Language Models. NAACL 2019. [paper] [code]
- [15] 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]
- [16] 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

o 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)