

Katerina Margatina

Applied Scientist at AWS Agentic AI Labs

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 Twitter  Github  LinkedIn  Google Scholar  Semantic Scholar

Research Interests

large language models, autonomous ai agents, agentic applications, multi-agent collaboration, tool use and learning, long-term memory, active learning, evaluation & benchmarking

Professional Experience

Jan. 2024 – now	Amazon Web Services , New York, USA <i>Applied Scientist at AWS Agentic AI Labs</i> <ul style="list-style-type: none">• AWS Agentic AI Org (2025-now): AWS Security Agent• AWS Bedrock Agents team (2024-2025): evaluation of autonomous agents, long-term memory, multi-agent collaboration, critics for parameter hallucination in tool calling, asynchronous agentic execution
Aug. 2022 – Mar. 2023	Meta , London, UK <i>Research Scientist Intern at Meta AI Research (FAIR Labs)</i> <ul style="list-style-type: none">• Active Learning Principles for In-Context Learning with Large Language Models (paper published at Findings of EMNLP 2023)
Apr. 2022 – Aug. 2022	Amazon Web Services , New York, USA <i>Applied Scientist Intern at Amazon Comprehend</i> <ul style="list-style-type: none">• Dynamic Benchmarking of Masked Language Models on Temporal Concept Drift with Multiple Views (paper published in EACL 2023)
Jun. 2021 – Feb. 2022	University of Copenhagen , Copenhagen, Denmark <i>Research Intern / Visiting Ph.D. in Computer Science at CoAStAL</i> <ul style="list-style-type: none">• Natural Language Processing Group (CoAStAL)• Supervisor: Prof. Anders Søgaard• Focus: learning from disagreement, fairness, cross-cultural NLP
Feb. 2020 - Jun. 2021	University of Sheffield , Sheffield, UK <i>Teaching Assistant at the Department of Computer Science</i> <ul style="list-style-type: none">• COM4513/6513 Natural Language Processing (2020 & 2021)• COM3110/4115 Text Processing (2020)
Nov. 2018 - Jul. 2019	DeepSea Technologies , Athens, Greece <i>Machine Learning Engineer at the AI team</i> <ul style="list-style-type: none">• Researched AI-driven models for vessel performance optimisation and voyage optimisation, with and without sensor data.• Implemented supervised and unsupervised deep neural models and deployed them on the AI platform.

Education

Oct. 2019 – Jul. 2024	University of Sheffield, UK <i>Ph.D. in Computer Science</i> <ul style="list-style-type: none">• Natural Language Processing Group (SheffieldNLP)• Supervisors: Prof. Nikolaos Aletras• Funding: Amazon Alexa Fellowship• Thesis: Exploring Active Learning Algorithms for Data Efficient Language Models
Jan. 2016 – Jul. 2016	Universidad Carlos III de Madrid, Spain <i>MEng in Computer Engineering (Erasmus Mobility in Masters)</i>
Sep. 2012 – Jul. 2019	National Technical University of Athens, Greece <i>BEng & MEng in Electrical and Computer Engineering</i> <ul style="list-style-type: none">• GPA: 8.06/10 (top 15%)• Major: Electronics and Systems• Thesis: “<i>Transfer Learning and Attention-based Conditioning Methods for Natural Language Processing</i>” – supervised by Prof. Alexandros Potamianos

Teaching & Other Academic Experience

2021	MSc. Dissertation Co-Supervisor <ul style="list-style-type: none">• Co-advised Ard Snijders, a MSc student from the University of Amsterdam, along with Douwe Kiela on the thesis project <i>Investigating Multi-source Active Learning for Natural Language Inference</i> (published in EACL 2023).• Co-advised Atsuki Yamaguchi, a MSc student from the University of Sheffield, along with George Chrysostomou and Nikolaos Aletras on the project <i>Frustratingly Simple Alternatives to Masked Language Modeling</i> (published in EMNLP 2021).
2019 - Ongoing	Teaching Assistant <ul style="list-style-type: none">• Lead lab sessions of the Text Processing and Natural Language Processing modules.• Marked lab reports following a pre-determined scheme set by the Course Leader.• Experience in face-to-face teaching with students that needed extra guidance.
2018 - Ongoing	Program Committee <ul style="list-style-type: none">• Reviewer for ACL, EMNLP, NAACL, EACL, AACL, WASSA, NLLP, DADC, ARR• Co-organizer of the First Workshop on Dynamic Adversarial Data Collection at NAACL 2022 (website)

Invited Talks & Presentations

Jul. 2023	Archimedes Summer School (slides)/ in-person in Athens
Jun. 2023	Meta AI (slides)/ in-person in London
Jun. 2022	Bloomberg, AI Group (slides) / in-person in NYC
Apr. 2022	NLPhD Speaker Series , University of Saarland (slides) / remote

Publications

- 2025
1. Alkhouri, T. *et al.* CONFETTI: Conversational Function-Calling Evaluation Through Turn-Level Interactions. *ACL* (2025).
 2. K., K. *et al.* A Study on Leveraging Search and Self-Feedback for Agent Reasoning. *REALM 2025* (2025).
- 2024
3. Kirk, H. R. *et al.* The PRISM Alignment Project: What Participatory, Representative and Individualised Human Feedback Reveals About the Subjective and Multicultural Alignment of Large Language Models. *NeurIPS (oral)* (2024).
- 2023
4. Alajrami, A., **Margatina, K.** & Aletras, N. Understanding the Role of Input Token Characters in Language Models: How Does Information Loss Affect Performance? *EMNLP* (2023).
 5. **Margatina, K.** & Aletras, N. *On the Limitations of Simulating Active Learning in Findings of ACL* (2023).
 6. **Margatina, K.**, Schick, T., Aletras, N. & Dwivedi-Yu, J. Active Learning Principles for In-Context Learning with Large Language Models. *Findings of EMNLP* (2023).
 7. **Margatina, K.** *et al.* Dynamic Benchmarking of Masked Language Models on Temporal Concept Drift with Multiple Views in *EACL* (2023).
 8. Snijders, A., Kiela, D. & **Margatina, K.** Investigating Multi-source Active Learning for Natural Language Inference in *EACL* (2023).
- 2022
9. Hershcovich, D. *et al.* Challenges and Strategies in Cross-Cultural NLP in *ACL* (2022).
 10. **Margatina, K.**, Barrault, L. & Aletras, N. *On the Importance of Effectively Adapting Pretrained Language Models for Active Learning in ACL* (2022).
- 2021
11. **Margatina, K.**, Vernikos, G., Barrault, L. & Aletras, N. *Active Learning by Acquiring Contrastive Examples in EMNLP* (2021).
 12. Yamaguchi, A., Chrysostomou, G., **Margatina, K.** & Aletras, N. *Frustratingly Simple Alternatives to Masked Language Modeling in EMNLP* (2021).
- 2020
13. Vernikos, G., **Margatina, K.**, Chronopoulou, A. & Androutsopoulos, I. *Domain Adversarial Fine-Tuning as an Effective Regularizer in Findings of EMNLP* (2020).
- 2019
14. **Margatina, K.** *Transfer Learning and Attention-based Conditioning Methods for Natural Language Processing. Thesis, NTUA* (2019).
 15. **Margatina, K.**, Baziotis, C. & Potamianos, A. *Attention-based Conditioning Methods for External Knowledge Integration in ACL* (2019).
- 2018
16. Chronopoulou*, A., Margatina*, K., Baziotis, C. & Potamianos, A. *NTUA-SLP at IEST 2018: Ensemble of Neural Transfer Methods for Implicit Emotion Classification in Workshop on Computational Approaches to Subjectivity, Sentiment and Social Media Analysis* (2018).

Honors & Awards

- 2024 | **NeurIPS:** Best paper award in NeurIPS 2024 Datasets & Benchmarks track for **The PRISM Alignment Project: What Participatory, Representative and Individualised Human Feedback Reveals About the Subjective and Multicultural Alignment of Large Language Models.**
- 2023 | **Microsoft:** Awarded a grant of \$20,000 in credits from Accelerate Foundation Models Research for our proposal: “*The PERDI Project: PERsonalised and DIverse Feedback for Humans-and-LLMs-in-the-loop*” (with Hannah Rose Kirk, Paul Röttger, Bertie Vidgen and Scott Hale).
Archimedes: Awarded 500€ from the **Archimedes** Center for Research in Artificial Intelligence, Data Science and Algorithms to do an in-person presentation at the Archimedes Summer School in July 2023.
- 2022 | **Dynabench:** Awarded a research grant of \$46,825 from Meta for our **proposal**: “*Adversarial NERDs: Optimising feedback between humans-and-model-in-the-loop*” (with Hannah Rose Kirk and Scott Hale).
- 2020 | **EMNLP:** Awarded a scholarship to participate to the virtual Conference on Empirical Methods in Natural Language Processing (**EMNLP 2020**).
MLSS: Selected to participate to the highly competitive Machine Learning Summer School (**MLSS**) organized by the Max Planck Institute for Intelligent Systems (180 out of 1300+ applications were accepted).
- 2019 | **Amazon Alexa Fellowship:** Awarded an **Amazon Alexa Fellowship** for a 3-year Ph.D. program at the University of Sheffield under the supervision of Dr. Nikolaos Aletras.
EETN Scholarship Award: Awarded a scholarship of from the Hellenic Artificial Intelligence Society (EETN) to attend the first Athens Natural Language Processing Summer School (**AthNLP**).
ACM-W Scholarship Award: Awarded an **ACM-W scholarship** of \$600 to attend the Annual Meeting of the Association for Computational Linguistics in Florence (**ACL 2019**).
- 2018 | **WASSA IEST:** Ranked 3rd out of 30 participants at the WASSA 2018 Implicit Emotion Shared Task (**IEST**) conducted by the **EMNLP 2018** Conference.