# Katerina Margatina

Ph.D. Student in Natural Language Processing

#### **Research Interests**

machine learning, deep learning, uncertainty estimation, transfer learning, active learning, semi-supervised learning, natural language processing, machine understanding and reasoning, interpretability, language modeling, fairness

#### Education

Jun. 2021 – Ongoing

## University of Copenhagen, Denmark

Visiting Ph.D. in Computer Science

- Natural Language Processing Group (CoAStaL)
- Supervisor: Prof. Anders Søgaard
- Focus: learning from disagreement, multiplicity, fairness, item response theory

Oct. 2019 – Ongoing

# University of Sheffield, UK

Ph.D. in Computer Science

- Natural Language Processing Group (SheffieldNLP)
- Supervisors: Dr. Nikolaos Aletras & Dr. Loïc Barrault
- Funding: Amazon Alexa Fellowship
- Focus: transfer learning, active learning, uncertainty estimation, language modeling, natural language understanding

Sep. 2012 – Jul. 2019

#### National Technical University of Athens, Greece

MEng & BEng in Electrical and Computer Engineering

- GPA: 8.06/10 (top 15%)
- Major: Electronics and Systems
- Coursework: neural networks, pattern recognition, natural language processing, computer vision, robotics, neuro-fuzzy robotic control, digital signal processing
- Speech & Natural Language Processing Group (SLP@NTUA)
- Thesis: "Transfer Learning and Attention-based Conditioning Methods for Natural Language Processing" supervised by Prof. Alexandros Potamianos

Jan. 2016 – Jul. 2016

# Universidad Carlos III de Madrid, Spain

MEng in Computer Engineering (Erasmus Mobility in Masters)

Sep. 2009 – Jul. 2012

# Arsakeio Psychikou, Greece

Secondary Education

- **GPA**: 19.8/20 (excellent)
- Nationwide University Entrance Examination: 19.25/20 (top 1% nationwide)

# **Work Experience**

Feb. 2020 - Ongoing

# University of Sheffield, UK

Teaching Assistant at the Department of Computer Science

- COM4513/6513 Natural Language Processing (Feb. 2020 Jun. 2020)
- COM3110/4115 Text Processing (Oct. 2020 Feb. 2021)
- COM6513 Natural Language Processing (Feb. 2021 Jun. 2021)

Nov. 2018 - Jul. 2019

## DeepSea Technologies, Piraeus, Greece

Machine Learning Engineer

- 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.

Sep. 2015 - Jul. 2019

#### Freelancer, Athens, Greece

Private Tutor

• Mathematics, Physics & Circuits Teacher

# **Teaching & Other Academic Experience**

2021 -

# **MSc.** Dissertation Co-Supervisor

Ongoing

• Co-supervised Atsuki Yamaguchi (with George Chrysostomou and Dr. Nikolaos Aletras), a MSc student from the University of Sheffield with the project *Frustratingly Simple Alternatives to Masked Language Modeling*.

2019 -

#### Teaching Assistant

Ongoing

- Assisted students during the 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 -

### Program Committee/Reviewer

Ongoing

• ACL, EMNLP, NAACL, EACL, AACL, WASSA, NLLP

#### **Publications**

- 2021
- Margatina, K., Barrault, L. & Aletras, N. Bayesian Active Learning with Pretrained Language Models in ArXiv (2021).
- 2. **Margatina, K.**, Vernikos, G., Barrault, L. & Aletras, N. *Active Learning by Acquiring Contrastive Examples* in *EMNLP* (2021).
- 3. Yamaguchi, A., Chrysostomou, G., **Margatina, K.** & Aletras, N. Frustratingly Simple Alternatives to Masked Language Modeling in EMNLP (2021).
- 4. Vernikos, G., **Margatina**, K., Chronopoulou, A. & Androutsopoulos, I. *Domain Adversarial Fine-Tuning as an Effective Regularizer* in *Findings of EMNLP* (2020).
- 5. **Margatina, K.** Transfer Learning and Attention-based Conditioning Methods for Natural Language Processing. Thesis, NTUA (2019).
  - 6. **Margatina**, **K.**, Baziotis, C. & Potamianos, A. *Attention-based Conditioning Methods for External Knowledge Integration* in *ACL* (2019).
- 7. 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**

EMNLP: Awarded a scholarship of 100\$ 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).

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 300 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 [link] of 600\$ to attend the Annual Meeting of the Association for Computational Linguistics in Florence (ACL 2019).

WASSA IEST: Ranked 3<sup>rd</sup> out of 30 participants at the WASSA 2018 Implicit Emotion Shared Task (IEST) conducted by the EMNLP 2018 Conference.

# **Programming Skills**

**Languages (excellent)**: Python, C, MATLAB, Bash **Languages (familiar with)**: C++, SQL, Java

Machine Learning Frameworks: PyTorch, Tensorflow, Keras

Other: LTFX, Unix, Git, Flask

#### Languages

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

# **Personal Interests**

Traveling, Tennis, Bouldering, Hiking, Skiing, Sailing, Cinema, Theater, Literature