

# Marzieh Fadaee

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## Current position

NLP/ML Research Engineer, Zeta Alpha Vector

Working on designing and implementing an NLU-Powered Tool to explore knowledge and information in large amount of data.

## Research Areas

Natural Language Processing • Machine Translation • Semantics • Machine Learning • Computational Linguistics

## Publications

- 2020 Marzieh Fadaee, Christof Monz. **The Unreasonable Volatility of Neural Machine Translation Models**, *Workshop on Neural Generation and Translation (WNGT) at ACL. Seattle, USA*
- 2018 Marzieh Fadaee, Christof Monz. **Back-Translation Sampling by Targeting Difficult Words in Neural Machine Translation**, *Conference on Empirical Methods in Natural Language Processing (EMNLP). Brussels, Belgium*
- 2018 Marzieh Fadaee, Arianna Bisazza, Christof Monz. **Examining the Tip of the Iceberg: A Data Set for Idiom Translation**, *International Conference on Language Resources and Evaluation (LREC). Miyazaki, Japan*
- 2017 Marzieh Fadaee, Arianna Bisazza, Christof Monz. **Data Augmentation for Low-Resource Neural Machine Translation**, *Association for Computational Linguistics (ACL). Vancouver, Canada*
- 2017 Marzieh Fadaee, Arianna Bisazza, Christof Monz. **Learning Topic-Sensitive Word Representations**, *Association for Computational Linguistics (ACL). Vancouver, Canada*
- 2013 Marzieh Fadaee, Hamidreza Ghader, Hesham Faili, Azadeh Shakery. **Automatic WordNet Construction Using Markov Chain Monte Carlo**, *International Conference on Intelligent Text Processing and Computational Linguistics (CICLING), Samos, Greece.*

## Education

- 2020 **PhD** in Artificial Intelligence, University of Amsterdam  
Worked in Information and Language Processing Systems (ILPS) group on developing models to understand interesting phenomena of the natural language. My research includes exploiting paraphrase relations for improved translation modeling, adapting the embedding space to capture the

ambiguity nature of the language using topics, translation of infrequent words with neural systems, and idiom translation.

2013 **MSc** in Computer Engineering, University of Tehran

2009 **BSc** in Computer Engineering, Sharif University of Technology

## Experience

2018 **Research Scientist Intern**, [Ebay CoreAI](#)

Worked on transfer learning by integrating universal contextualized embeddings for inter-domain and cross-lingual challenges.

2014-present **Research Assistant**, [University of Amsterdam](#)

Duties include modeling and implementation of modules of an in-house translation system, data preprocessing, running and analysis of experiments.

2013-2014 **Researcher and Developer**, [Faraazin Translation Project](#)

Worked on developing a Persian↔English translation system.

2010-2013 **Research Assistant**, University of Tehran

Worked in NLP Lab and IIS Lab on constructing a Semantic Network for the Persian language and improving retrieval results in Query Expansion and Cross-Lingual IR.

2007-2009 **Software Developer**, Iran Info-Tech Development Co.

## Technical skills

### PROGRAMMING LANGUAGES

Proficient in Java, Python, Perl, C#, and R  
Familiar with C/C++, SQL, HTML, PHP

### NLP PACKAGES

Moses, SRILM, Phrasal, word2vec, Stanford CoreNLP, ELMo, BERT, OpenNMT

### MACHINE LEARNING

Hands-on experience with supervised (classification/regression algorithms) and unsupervised (clustering, language modeling) techniques. Experience scikit-learn. Deep learning using Torch and PyTorch on GPUs. Probabilistic models.

## Teaching

2017 *University of Amsterdam*. Applied Language Technology Course. Masters Artificial Intelligence

2016 *University of Amsterdam*. Applied Language Technology Course. Masters Artificial Intelligence

2015 *University of Amsterdam*. Data Mining Course. Bachelors Information Science

2013 *University of Tehran*. Natural Language Processing Course. Masters Artificial Intelligence

2012 *University of Tehran*. Pattern Recognition Course. Masters Artificial Intelligence

2011 *University of Tehran*. Advance Algorithm Course. Masters Artificial Intelligence

## Service to the profession

Program Committee at Conference on Empirical Methods in Natural Language Processing (EMNLP2020)  
Program Committee at Association for Computational Linguistics (ACL2020)  
Scientific Committee at International Conference on Language Resources and Evaluation (LREC2020)  
Program Committee at a Workshop on NLP Open Source Software (NLP-OSS2020)  
Program Committee at ACM Transactions on Data Science (TDS2019)  
Program Committee at Association for Computational Linguistics (ACL2019)  
Program Committee a Workshop on e-Commerce and NLP (ECNLP2019) held at WWW  
Program Committee at Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL2019)  
Presentation in Deep Learning and Reinforcement Learning Summer School (2018, Toronto, Canada)  
Program Committee at WMT2017  
Organizer and chair of the research group's weekly seminar at University of Amsterdam  
Chair of the research group's weekly meeting at University of Amsterdam  
Co-developer of Arabic-English and Chinese-English translation systems of the University of Amsterdam for NIST Open MT Evaluation  
Participation Google NLP Summit (2015, Zürich, Switzerland)  
Participation in MT Marathon (2014, Trento, Italy)

## Grants & awards

2018	Travel grant for participating in Deep Learning and Reinforcement Learning Summer School, Toronto, Canada
2017	Travel grant for participating in Association for Computational Linguistics (ACL) conference, Vancouver, Canada
2015	Travel grant for participating in Google's NLP PhD Summit, Zürich, Switzerland
2011	Research grant from Research Institute of ICT (No. CS1391-4-19)
2003	Semifinalist in Iran National Olympiad in Informatics

## Language skills

Persian (Farsi): Native language  
English: Fluent, TOEFL (July 2013) Internet-Based Test: 110/120  
Spanish: Proficient, Cervantes DELE Diploma in Spanish Level B2  
Dutch: Moderate  
Arabic: Moderate