Maryam Aminian

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Research Interests

- Natural Language Processing and Computational Linguistics
- Machine Learning and Pattern Recognition
- Persian NLP

Education

PhD Student
Department of Computer Science, George Washington University, Washington, DC, Sep 2013-Present
GPA: 3.95/4
Supervisor: Dr. Mona T. Diab

M.Sc. in Artificial Intelligence
Artifcial Intelligence and Robotics, Computer Engineering Department, Sharif University of Technology, Tehran, Iran, Sep 2010 - Sep 2012
GPA: 18.76/20 (**Ranked 3rd among all Artificial Intelligence students**), Final Thesis: 19.5/20
Thesis Title:"Semantic Clustering of Persian Verbs"
Supervisor: Dr. Hossein Sameti

B.Sc. in Computer Engineering (Software Engineering)
Software Engineering, Department of Computer Engineering, Iran University of Science and Technology, Tehran, Iran, Sep 2006 - Sep 2010
GPA: 17.69/20 (**Ranked 1st among all Computer Engineering students**), Final Thesis: 20/20
Thesis Title:"A Survey on Word Sense Disambiguation Methods"
Supervisor: Dr. Behrooz Minaei-Bidgoli

Pre University Certificate in Mathematics and Physics
Mia'ad high school,
Damghan, Iran, Sep 2005-Sep 2006
GPA: 19.97/20

High School Diploma in Mathematics and Physics
Hazrat Zeinab high school,
Damghan, Iran, Sep 2002 - Sep 2005
GPA: 19.91/20

Employments

- **Graduate Research Assistant**, BOLT Project: "Handling Dialectical Words in Statistical Machine Translation", Department of Computer Science, George Washington University, Washington, DC, Sep 2013-Present.

- **Graduate Research Assistant**, Tharwa Project: "Tharwa: A Large Scale Dialectal Arabic - Standard Arabic - English Lexicon", Department of Computer Science, George Washington University, Washington, DC, Sep 2013-Present.

- **Speech Processing Lab Teaching Assistance**, Sharif University of Technology, Computer Engineering Department (Dr. Hossein Sameti), Fall 2011.

- **Technical and Scientific Representation Course Teaching Assistance**, Sharif University of Technology, Computer Engineering Department (Dr. Hadi Veisi), Spring 2012.

- **Speech Processing Course Teaching Assistance**, Sharif University of Technology, Computer Engineering Department (Dr. Hadi Veisi), 2012.

- **Other**, A Member of Executive Commitee in $17^{t}h$ Annual CSI Computer Conference,Tehran, 2012.

Awards And Honors

- Ranked 3rd according to GPA among all M.Sc. students of Computer Engineering (Artificial Intelligence) in Sharif University of Technology, 2012.
- Ranked 1st according to GPA among all B.Sc. students of Computer Engineering (both software and hardware) in Iran University of Science and Technology, 2010.
- Exceptional talent award for the M.Sc. program from Computer Engineering department of Iran University of Science and Technology, 2010.
- Exceptional talent award for the M.Sc. program from Computer Engineering department of Sharif University of Technology, 2010.
- Achieving the 120th rank in the National University Entrance Examination (English Literature) for the B.Sc. degree among more than 200,000 participants, 2006.
- Selected in top 0.6% of nearly 500,000 participants in National University Entrance Examination om Mathematics and Physics, 2006.
- Accepted in the first stage of 14th and 15th Iranian National Olympiad in Computer (INOC).
- Finalist in Iranian National Olympiad in Literature, 2004.

Publications

Journal Papers

1. M. S. Rasooli, H. Faili, B. Minaei Bdgoli, **M. Aminian**, "Unsupervised Persian Verb Valency Induction", Journal of Signal and Data Processing, 2013, pp. 3-12.

Conference Papers

1. **Maryam Aminian**, Mahmoud Ghoneim, Mona Diab, "Unsupervised False Friend Disambiguation Using Contextual Word Clusters and Parallel Word Alignments", In Proceedings of the Ninth Workshop on Syntax, Semantics and Structure in Statistical Translation (SSST-9), 2015, Denver, Colorado *(To Appear)*.

2. **Maryam Aminian**, Mahmoud Ghoneim, Mona Diab, "Handling OOV Words in Dialectal Arabic to English Machine Translation", In Proceedings of the Workshop of Language Technology for Closely Related Languages and Language Variants (LT4CL2014), 2014, Doha, Qatar, pp 99-108.

3. M. Diab, M. Al-Badrashiny, **Maryam Aminian**, M. Attia, P. Dasigi, H. Elfardy, R. Eskander, N. Habash, A. Hawwari, W. Salloum, "Tharwa: A Large Scale Dialectal Arabic - Standard Arabic - English Lexicon", The 9th Language Resources and Evaluation Conference, Reykjavik, Iceland, May 2013.

4. **M. Aminian**, M. S. Rasooli, H. Sameti, "Semantic Clustering of Persian Verb Based on Syntactic Information", The 20th International Conference on Language Processing and Intelligent Information Systems ,Warsaw, Poland, June. 2013.

Technical Reports

1. Maryam Aminian,"Semantic Clustering of Persian Verbs", Master's Thesis, Computer Engineering Department, Sharif University of Technology, Tehran, Iran, 2012 (in Persian).

2. Maryam Aminian,"A Survey on Word Sense Disambiguation Methods" , Bachelor's Thesis, Computer Engineering Department, Iran University of Science and Technology, Tehran, Iran, 2010 (in Persian).

3. Maryam Aminian, "A Survey on Part of Speech Tagging Methods and Investigating challenges in Persian", Artificial Intelligence Course Project,Computer Engineering Department, Iran University of Science and Technology, Tehran, Iran, Spring 2008 (in Persian).

4. Maryam Aminian, "A Survey on Speech Summarization Methods", Speech Processing Course Project, Computer Engineering Department, Sharif University of Technology, Tehran, Iran, Fall 2010 (in Persian).

5. Maryam Aminian, "A Survey on Sentence Boundary Detection Methods in Speech", Speech Recognition Course Project,Computer Engineering Department, Sharif University of Technology, Tehran, Iran, Spring 2011 (in Persian).

Talks

- "Semantic Clustering of Persian Verbs", Natural Language Processing Group, Department of Computer Science, Columbia University, Fall 2013.

Professional Services

- Reviewer for the 1st National Conference on the Semantics ans Syntax of Iranian Linguistics, 2014.
- Reviewer for the Symposium on Artificial Intelligence and Signal Processing (AISP 2013).
- Reviewer for the 19th International Conferences of Computer Society of Iran (CSICC 2013).

Interesting Courses

Natural Language & Speech Processing Natural Language Processing (18.4/20), Speech Processing (20/20), Speech Recognition (19/20)

Machine Learning & Pattern Recognition Machine Learning (17.7/20), Statistical Pattern Recognition (17.2/20), Neural Networks and Fuzzy Systems (18.8/20)

Mathematics & Statistics Stochastic Processes (18.8/20), Engineering Mathematics (18/20)

Software Engineering Software Engineering I (18.2/20), Software Engineering II (18.2/20), Concurrent Programming (20/20)

Artificial Intelligence Artificial Intelligence (19.2/20)

Selected Projects

Design and Development of An Unsupervised Clusterer For Clustering Persian Verbs Semantically Based on Levin (1993), Advisor: Dr. Hossein Sameti, Spring 2012.

Building The First Semantic Classification of Persian Verbs Based on VerbNet Classes, Advisor: Dr. Hossein Sameti, Spring 2012.

Development of A System For Reinforcement Learning in Grid Space, Advisor: Dr. Hamid Beigi, Fall 2010.

Image Classification Using Weighted Feature Support Vector Machine Method, Advisor: Dr. Hamid Reza Rabiee, Spring 2011.

Design and Development of a CMS for Medical Centers, Advisor: Dr. Behrooz Minaei Bidgoli, Spring 2009.

Skills

Human Language: Persian (native), English (fluent), Arabic (moderate).

Programming Language: Java (proficient), R (proficient), Python, C#, C++ (beginner), Matlab.