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Forough Arabshahi

Position

July 2018 - Present **Post-Doctoral Associate, Department of Machine Learning, School of Computer Science**, *Carnegie Mellon University*, Pittsburgh, PA.

Advisor: Prof. Tom Mitchell

Education

Spring 2018 **PhD in Electrical Engineering and Computer Science**, *University of California Irvine*, Irvine, CA.

GPA: 3.981/4.00

Thesis: *Learning Latent Hierarchical Structures via Probabilistic Models and Deep Learning*

Advisor: Prof. Animashree Anandkumar

Co-Advisor: Prof. Sameer Singh

Fall 2012 **M.Sc in Electrical Engineering, Communication Systems, School of Electrical Engineering**, *Amirkabir University of Technology*, Tehran, Iran, .

GPA: 18.49/20

Thesis: *Microwave Imaging of the Breast Tissue for Breast Cancer Detection*

Advisor: Prof. Hamid Sheikhzadeh-Nadjar

Summer 2010 **B.Sc in Electrical Engineering, Communications, School of Electrical and Computer Engineering**, *Shiraz University*, Shiraz, Iran.

GPA: 18.14/20

Thesis: *A MAC Layer Protocol for Underwater Wireless Acoustic Sensor Networks*

Advisor: Prof. Alireza Keshavarz-Haddad

Research Interests

- Deep Learning
- Probabilistic Learning
- Natural Language Processing
- Learning by Instruction

Publications

- **F. Arabshahi,** B. Liu, T. Mitchell, *"End-To-End Differentiable Context Aware Coreference Resolution"*, *In Preparation*.
- **F. Arabshahi,** E.Nie, S. Singh, A. Anandkumar, *"Memory-Augmented Recursive Neural Networks"*, In preparation.
- **F. Arabshahi,** M. Gawarecki , K. Rivard, T. Mitchell, *"CORGI: Commonsense Reasoning by Instruction"*, *Under Review*.
- Z. Liu*, **F. Arabshahi***, I. Labutov, T. Mitchell, *"Look-up and Adapt: A One-shot Semantic Parser:"*, *Appearing as a long paper in the 2019 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, * Equal Contribution.
- **F. Arabshahi,** S. Singh, A. Anandkumar, *"Towards Solving Differential Equations through Neural Programming"*, *ICML workshop Neural Abstract Machines & Program Induction v2 (NAMPI), Stockholm, Sweden, 2018*.

- **F. Arabshahi,** S. Singh, A. Anandkumar, *"Combining Symbolic Expressions and Black-box Function Evaluations for Training Neural Programs"*, *Proceedings of the International Conference on Learning Representations (ICLR), 2018*.
- **F. Arabshahi,** S. Singh, A. Anandkumar, *"Combining Symbolic Expressions and Black-box Function Evaluations in Neural Programs"*, NIPS 2017 highlights, Learn How to Code a Paper with State of the Art Frameworks, NIPS 2017 MLtrain workshop.
- **F. Arabshahi,** A. Anandkumar, *"Spectral Methods for Correlated Topic Models"*, *Appeared in the Proceedings of the International Conference on Artificial Intelligence and Statistics (AISTATS), 2017*, PMLR 54:1439-1447.
- **F. Arabshahi,** R. Weiss, A. Anandkumar, *"Beyond LDA: Spectral Methods for Topic Modeling Based on Exchangeable Partitions"*, *NIPS workshop on Bayesian Nonparametrics: The Next Generation, 2015.*
- **F. Arabshahi,** F. Huang, A. Anandkumar, C. T. Butts, S. M. Fitzhugh, *"Are you going to the party: depends, who else is coming? [Learning hidden group dynamics via conditional latent tree models]"*, *Data Mining (ICDM), 2015 IEEE International Conference on, Atlantic City, NJ, 2015*.
- **F. Arabshahi,** F. Huang, A. Anandkumar, C. Butts, *"Modeling and Predicting Dynamic Social Interactions Using Conditional Latent Random Fields"*, *Statistical Inference for Network Models, NetSci Satellite Symposium 2014*.
- **F. Arabshahi,** S. Monajemi, H. Sheikhzadeh, K. Raahemifar, R. Faraji-Dana, *"A Frequency Domain MVDR Beamformer for UWB Microwave Breast Cancer Imaging in Dispersive Mediums"*, *13th IEEE International Symposium on Signal Processing and Information Technology (ISSPIT) 2013*.

Honors

Fall 2019 **Rising Stars 2019**, *Selected to participate in Rising Stars 2019, an academic career workshop for women in EECS hosted by the University of Illinois at Urbana-Champaign.*

Spring 2018 **ICLR travel award**, *Recipient of $500 for attending the International Conference on Learning Representations, Vancouver, CA.*

Spring 2017 **Phi Betta Kappa Alumni International Scholarship**, *Recipient of $2000 for continuing my graduate studies at University of California Irvine.*

Fall 2015 **GHC scholarship**, *Grace Hopper Celebration of Women in Computing.*

Fall 2015 **ICDM student award**, *IEEE International Conference on data mining student award, $550.*

Summer 2015 **UCI data science initiative summer fellowship**, *University of California Irvine*, $6,039 stipend, Acceptance rate: 15/115.

Fall 2014 **Bren School of ICS grace hopper grant**, *University of California Irvine.*

Summer 2014 **Machine Learning summer school scholarship grant**, *Carnegie Mellon University.*

Fall 2010 **Exceptional talent student award**, *exempted from the Nationwide Graduate Entrance Examinations for graduate studies at Shiraz University.*

Internships

Summer 2017 **Software Engineer Intern**, *Pepperdata Inc.*, *Applying machine learning and data analysis tools to the time-series data available in Pepperdata.*

Summer 2016 **Research Intern**, *Yahoo! Labs*, *Link industries: Advertisement clustering using spectral methods*, Proposed a joint matrix and tensor factorization algorithm for clustering Yahoo's advertisements for recommendation purposes.

Teaching Experience

Spring 2018 **"Spectral Methods: Latent Variable Models"**, *Invited lecture in Probabilistic Graphical Models*, Department of Machine Learning, Carnegie Mellon University.

Fall 2013 **Computational methods in EECS (EECS 10)**, *Teaching Assistant*, Department of Electrical Engineering and Computer Science, University of California Irvine.

Spring 2010 **Communications I**, *Teaching Assistant*, School of Electrical and Computer Engineering, Shiraz University.

References

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Carter T. Butts
Professor
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