

MOSTAFA DEHGHANI

Curriculum Vitae

Research Interests

- Machine Learning (Deep Learning)
- Information Retrieval
- Natural Language Processing
- Data Mining and Decision Support Systems

Education

- 2014–present **PhD candidate in Information Retrieval**, *Institute for Logic, Language and Computation, University of Amsterdam*, Amsterdam, Netherlands.
- Research *General Topic: “Deep Learning for Information Retrieval”*, under supervision of Dr. Jaap Kamps, University of Amsterdam
- 2010–2013 **Masters of Science in Computer Engineering, Software**, *University of Tehran*, Tehran, Iran, *GPA – 19.14/20*.
- M.Sc. Thesis *“Email Management in Multilingual Environments”*, under supervision of Dr. Azadeh Shakery, and Dr. Masoud Asadpour. (Graduated: Spring 2013)
- 2006–2010 **Bachelor of Science in Computer Engineering, Software**, *Shahrood University of Technology*, Shahrood, Semnan, Iran, *GPA – .17.95/20 (during last two years: 18.85/20)*.
- B.Sc. Thesis *“Personalizing Search Engine Results Using User Interests”*, under supervision of Prof. Hamid Hassanpour. (Graduated: Spring 2010)

Research Experience

- 2016–present Un/Semi-Supervised Deep Learning
- Training Neural Networks with Weak Supervision Signals
- 2015–present Neural Models for Information Retrieval
- Employing Deep Neural Computational Models for the Retrieval Problem
 - Search Conversationalization
 - Query/Document Representation Learning for Retrieval and Ranking
- 2014–2016 Language Modeling for Core Information Retrieval
- Significant Words Language Models for Retrieval, Ranking and Classification
 - Classification Models for Evolving Hierarchies
- 2014–present Exploratory Search/ Graph Search/ Contextual Suggestion/ PoliInformatics
- Contextual Suggestion and Content Customization (TREC)
 - Exploratory Political Search (ExPoSe) Project (Currently running)
 - Entity Recognition, Disambiguation and Linking and Knowledge Graph Building
- 2013–2014 Plagiarism Detection
- Plagiarism Source Retrieval Using Information Retrieval Techniques
 - PAN challenge - CLEF2014: Expanded N-Grams for Semantic Text Alignment
 - PAN challenge - CLEF2014: Authorship Identification Using Dynamic Selection of Features from Probabilistic Feature Set
- 2010–2013 *Email Mining* (M.Sc. THESIS)
- Building a Multilingual Email Dataset
 - Reconstructing Conversation Threads in Email Corpora
 - Attentive Learning for Email Categorization
- 2011–2014 *Mixed and Multilingual Text Processing*
- Measuring Mixed and Multilingual Document Similarity Based on Language Modeling Framework
 - Building a Domain-Based Persian-English Comparable Corpus
 - Persian-English Cross-Language Information Retrieval

- 2011-2013 *Social Networks Analysis*
- Analyzing Social Communications in Mailing Lists Corpora
 - Detecting Information Diffusion Network in Tweeter and Persian Web Data.
- 2012-2014 *Business Intelligent and Decision Support Systems*
- Designing and Developing A Decision Support System for Referee Selection of Iran National Science Foundation's Research
 - Business Intelligence and Data Analysis: Help-Desk System, University of Tehran
 - Developing appliances for Xamin Operating system, CyberSpace Research Institute (CSRI)
- 2009-2010 *Personalization* (B.Sc. THESIS)
- Developing a Personalized Meta Search Engine. Re-ranking Search Engine Results Based on Users Profiles, "Shahrood University of Technology Personalized Search Engine"(SHUT-PSE)

Publications

- [1] **Mostafa Dehghani**, S. Rothe, E. Alfonseca, and P. Fleury "Learning to Attend, Copy, and Generate for Session Based Query Suggestion", To appear in the proceedings of The 26th ACM International Conference on Information and Knowledge Management (CIKM'17)
- [2] H.Azarbonyad, **Mostafa Dehghani**, J. Kamps, and M. Marx. "Words are Malleable: Computing Semantic Shifts in Political and Media Discourse", To appear in the proceedings of The 26th ACM International Conference on Information and Knowledge Management (CIKM'17)
- [3] **Mostafa Dehghani**, H. Azarbonyad, J. Kamps, M. de Rijke. "Share your Model instead of your Data: Privacy Preserving Mimic Learning for Ranking", In proceedings of Neu-IR: SIGIR Workshop on Neural Information Retrieval
- [4] **Mostafa Dehghani**, H. Zamani, A. Severyn, J. Kamps, and W. B. Croft. "Neural Ranking Models with Weak Supervision", In proceedings of the International ACM SIGIR Conference on Research and Development in Information Retrieval(SIGIR17), 2017.
- [5] **Mostafa Dehghani**, G. Jagfeld, A. Olieman, H. Azarbonyad J. Kamps, and M. Marx. "On Search Powered Navigation", In proceedings of the ACM International Conference on the Theory of Information Retrieval (ICTIR'17).
- [6] T Kenter, A Borisov, C Van Gysel, **Mostafa Dehghani**, M. de Rijke, and B Mitra. "Neural Networks for Information Retrieval", Accepted Tutorial at International ACM SIGIR Conference on Research and Development in Information Retrieval(SIGIR17), 2017.
- [7] H. Azarbonyad, **Mostafa Dehghani**, T. Kenter, M. Marx, J. Kamps and M. de Rijke. "Hierarchical Re-estimation of Topic Models for Measuring Topical Diversity", In proceedings of the European Conference on IR Research (ECIR'17), 2017.
- [8] **Mostafa Dehghani**,G. Jagfeld, H. Azarbonyad, A. Olieman, J. Kamps, and M. Marx. "Telling how to narrow it down: Effect of Browsing Path Recommendation on Exploratory Search", In proceedings of the ACM SIGIR Conference on Human Information Interaction and Retrieval (CHIIR'17), 2017.
- [9] **Mostafa Dehghani**, H. Azarbonyad, J. Kamps, D. Hiemstra, and M. Marx. "Inoculating Relevance Feedback Against Poison Pills", In proceedings of Dutch-Belgian Information Retrieval (DIR'16), 2016
- [10] **Mostafa Dehghani**, S. Abnar, and J. Kamps. "The Healing Power of Poison: Helpful Non-relevant Documents in Feedback", In Proceedings of The ACM International Conference on Information and Knowledge Management (CIKM'16), 2016.
- [11] **Mostafa Dehghani**, H. Azarbonyad, J. Kamps, D. Hiemstra, and M. Marx. "Luhn Revisited: Significant Words Language Models", In the proceedings of The ACM International Conference on Information and Knowledge Management (CIKM'16), 2016.
- [12] **Mostafa Dehghani**, H. Azarbonyad, J. Kamps, and M. Marx. "Significant Words Language Model for Contextual Suggestion", In Proceedings of Text REtrieval Conference (TREC), 2016.
- [13] **Mostafa Dehghani**, H. Azarbonyad, J. Kamps, and M. Marx. "On Horizontal and Vertical Separation in Hierarchical Text Classification", In the proceedings of ACM SIGIR International Conference on the Theory of Information Retrieval (ICTIR'16), 2016. (**Best Paper Award**)
- [14] **Mostafa Dehghani**, H. Azarbonyad, J. Kamps, and M. Marx. "Two-Way Parsimonious Classification Models for Evolving Hierarchies", In the proceedings of Conference and Labs of the Evaluation Forum (CLEF'16), 2016. (**Best Paper Honorable Mention**)

- [15] L. Quiroz, L. Mennes, **Mostafa Dehghani**, E.Kanoulas. “*Distributional Semantics for Medical Information Extraction*”, In Notebook for CLEFeHealth at Conference and Labs of the Evaluation Forum (CLEF’16), 2016.
- [16] **Mostafa Dehghani**. “*Significant Words Representations of Entities*”, In proceedings of the 39th International ACM SIGIR Conference on Research and Development in Information Retrieval, 2016. (**SIGIR Doctoral Consortium Award**)
- [17] **Mostafa Dehghani**, H. Azarbyad, J. Kamps, and M. Marx. “*Generalized Group Profiling for Content Customization*”, In proceedings of ACM SIGIR Conference on Human Information Interaction and Retrieval (CHIIR), 2016.
- [18] **Mostafa Dehghani**, A. Shakery, M. S. Mirian. “*ALECSA: Attentive Learning for Email Categorization using Structural Aspects*”. Knowledge-Based Systems Journal, 2016.
- [19] R. Rahimi, A. Shakery, J. Dadashkarimi, M. Ariannezhad, **Mostafa Dehghani**, and H. N. Esfahani, “*Building a Multi-Domain Comparable Corpus Using a Learning to Rank Method*”. In Journal of Natural Language Engineering, Cambridge University Press, 2016.
- [20] S. H. Hashemi, **Mostafa Dehghani**, and J. Kamps. “*Parsimonious User and Group Profiling in Venue Recommendation*”, In Proceedings of Text REtrieval Conference (TREC), 2015.
- [21] S. H. Hashemi, **Mostafa Dehghani**, and J. Kamps. “*University of Amsterdam at TREC 2015: Contextual Suggestion Track*”, In The Twenty-Fourth Text REtrieval Conference Notebook (TREC). National Institute for Standards and Technology, 2015.
- [22] **Mostafa Dehghani**, H. Azarbyad, M. Marx, and J. Kamps. “*Learning to Combine Sources of Evidence for Indexing Political Texts*”, In Dutch-Belgian Information Retrieval (DIR’15), 2015.
- [23] H. Azarbyad, **Mostafa Dehghani**, M. Marx, and J. Kamps. “*Time-Aware Authorship Attribution of Short Texts*”, In Dutch-Belgian Information Retrieval (DIR’15), 2015.
- [24] S. A. Tabrizi, J. Dadashkarimi, **Mostafa Dehghani**, H. N. Esfahani, A. Shakery “*Revisiting Optimal Rank Aggregation: A Dynamic Programming Approach*”, In proceedings of ACM SIGIR International Conference on the Theory of Information Retrieval (ICTIR’15), 2015
- [25] S. Abnar, **Mostafa Dehghani**, A. Shakery, “*Meta Text Aligner: Text Alignment Based on Predicted Plagiarism Relation*”, In proceedings of Conference and Labs of the Evaluation Forum (CLEF’15), 2015
- [26] H. Azarbyad, F. Saan, **Mostafa Dehghani**, M. Marx, and J. Kamps, “*Are Topically Diverse Documents Also Interesting?*”, In proceedings of Conference and Labs of the Evaluation Forum (CLEF’15), 2015
- [27] H. Azarbyad, **Mostafa Dehghani**, M. Marx, and J. Kamps, “*Time-Aware Authorship Attribution for Short Text Stream*”, In proceedings of the 38th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR’15), 2015
- [28] **Mostafa Dehghani**, H. Azarbyad, M. Marx, and J. Kamps. “*Sources of evidence for automatic indexing of political texts*”, In proceedings of Advances in Information Retrieval: 37th European Conference on IR Research (ECIR’15), 2015. (**Best Poster Award**)
- [29] A. Olieman, H. Azarbyad, **Mostafa Dehghani**, J. Kamps, M. Marx “*Entity linking by focusing DBpedia candidate entities*”, In proceedings of the first international workshop on Entity recognition and disambiguation (ERD), 2014
- [30] H. Zamani, H. N. Esfahani, P. Babaie, S. Abnar, **Mostafa Dehghani**, A. Shakery “*Authorship Identification Using Dynamic Selection of Features from Probabilistic Feature Set*”, In proceedings of Conference and Labs of the Evaluation Forum (CLEF’14), 2014.
- [31] S. Abnar, **Mostafa Dehghani**, H. Zamani, A. Shakery, “*Expanded N-Grams for Semantic Text Alignment*”, Notebook for PAN at Conference and Labs of the Evaluation Forum (CLEF’14), 2014
- [32] **Mostafa Dehghani**, A. Shakery, M. Asadpour, and A. Koushkestani, “*A Learning Approach for Email Conversation Thread Reconstruction*”, Journal of Information Science, 2013
- [33] A. Balali, H. Faili, M. Asadpour, and **Mostafa Dehghani**, “*A Supervised Approach for Reconstructing Thread Structure in Comments on Blogs and Online News Agencies*”, Computing and Systems Journal, 2013
- [34] **Mostafa Dehghani**, M. Asadpour, and A. Shakery, “*An Evolutionary-Based Method for Reconstructing Conversation Threads in Email Corpora*”, In proceedings of The 2012 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM’12), 2012.

- [35] H. Hassanpour, **Mostafa Dehghani**, and Y. Keneshloo, “*Personalizing Search Engine Results Based on User Behavior*”, In proceedings of The Iran Data Mining Conference (IDMC’04), 2010.

Work Experience

- Nov. 2016 – **Google, Research & Machine Intelligence Group.**
 Feb. 2017 As Research Intern (4 months),
Text Generation for Search Conversationalization
During my internship, as a pet project I also worked on training neural networks with weak supervision, which turned out to be an awesome work!
- 2014–Present **Department of Media Studies, Faculty of Humanities, University of Amsterdam**, Amsterdam, Netherlands.
As Researcher,
 ExPoSe Project: Exploratory Political Search
- 2013–2014 **Iran Telecommunication Research Center(ITRC)**, Tehran, Iran.
As Developer,
 Developing applience for “Xamin” virtualization solution.
- 2013–2014 **The Center of IT and Cyberspace (CITC), University of Tehran**, Tehran, Iran.
As Data Analyst,
 Analyzing and Organizing Help-Desk system data exploiting Business Intelligence tools.
- 2012–2013 **Social Network Laboratory, University of Tehran**, Tehran, Iran.
As Head of Information Diffusion Analysis Team,
 Designing and developing a semi-automatic engine for analogizing text-based information diffusion.
- 2010–2011 **RayaPhone Communication Company**, Tehran, Iran.
As developer in several projects,
 Developing and Maintenance of "Telephone Directory Service" System, Developing of IP-PBX Call Center offered by Mobile Communication Corporation Of Iran (MCCI), Developing a Fax Audio Detection System.
- 2009 **Shahrood University of Technology**, Shahrood, Semnan, Iran.
As Technical Support Engineer on designing and developing an E-journal management system(EJSUT).

Teaching Experience

- Taught Courses
- *Industrial Management Institute, Tehran, Iran*
 - Spring 2012: Advanced Management of Information Systems.
- Teaching Assistantship
- *University of Amsterdam, Amsterdam, The Netherlands*
 - Summer 2016, Mentoring Research Interns at Information Retrieval group at ILLC.
 - Spring 2015, Information Retrieval, Graduate course by Dr. J. Kamps.
 - *University of Tehran, Tehran, Iran*
 - Spring 2012, Spring 2013, Fall 2013: Intelligent Information Retrieval, Graduate course by Dr. A. Shakery.
 - Spring 2013: Biocomputing, Graduate course by Dr. M. Asadpour.
 - Spring 2012, Spring 2013, Fall 2013: Decision Support Systems, Graduate course by Dr. M.S. Mirian.
 - Spring 2013: Intelligent Systems , Under-graduate course by Dr. M.S. Mirian.
 - Fall 2012, Spring 2014: Data Mining, Graduate course by Dr. A. Shakery.
 - Fall 2012: Pattern Recognition, Graduate course by Dr. M.S. Mirian.
 - Fall 2011-Fall 2012-Fall 2013: Advanced Algorithm Design and Analysis, Graduate course by Dr. H. Faili.
 - Spring 2012: Social Networks Analysis, Graduate course by Dr. M. Asadpour.
 - Fall 2011-Spring 2012: Operating Systems, Under-graduate course by Dr. M. Kargahi.
 - *Shahrood University of Technology, Shahrood, Semnan, Iran*
 - Spring 2010: Computer Architecture, Under-graduate course by Dr. H. Hassanpour.
 - Spring 2010: Principle of Compiler Design, Under-graduate course by Dr. A. Pouyan.
 - Fall 2009: Data Storage & Retrival, Under-graduate course by Dr. H. Hassanpour.
 - Spring 2009: Algorithms Design, Under-graduate course by Dr. M. Rezvani.
 - Fall 2008: Data Structure, Under-graduate course by Dr. M. Rezvani.

Skills

Computer Skills

- *Languages*
 - Expert in Python, Java, and C/C++
 - Familiar with Perl, and C#
 - Proficient in Web design and programming (PHP, ASP.NET, JavaScript, CSS and AJAX)
- *Technical Tools and Frameworks*
 - Neural Network frameworks like TensorFlow, Theano
 - Distributed Programming using Hadoop's Map/Reduce
 - Proficient in developing programs based on open source data/text processing tools and libraries (Industrial & Research Platforms)
 - Search Engines and Information Retrieval Tools
 - Data Mining and Text Mining Tools and Libraries
 - Graph Mining and Social Networks Analysis Tool and Libraries

General Skill ○ Professional Certificate in Project Management Based on *Project Management Body Of Knowledge*, PMBOK®:2008

Honors And Awards

- 2017 UvA385 Grant: Grant that are awarded to outstanding UvA PhD candidates to acquire international experience.
- 2017 ACM SIGIR Student Travel Grant for Attending ACM SIGIR International Conference on the Theory of Information Retrieval (ICTIR2017)
- 2017 ACM SIGIR Student Travel Grant for Attending International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR2017)
- 2017 ACM SIGIR Student Travel Grant for Attending ACM SIGIR Conference on Human Information Interaction and Retrieval (CHIIR2017)
- 2016 Student Support Grant for Attending Conference on Neural Information Processing Systems (NIPS'16)
- 2016 ACM SIGIR Student Travel Grant for Attending The ACM International Conference on Information and Knowledge Management (CIKM'16)
- 2016 Best Paper Award at the ACM SIGIR International Conference on the Theory of Information Retrieval (ICTIR'16)
- 2016 Best Paper Honorable Mention at Conference and Labs of the Evaluation Forum (CLEF'16)
- 2016 ACM SIGIR Student Travel Grant for Attending ACM SIGIR International Conference on the Theory of Information Retrieval (ICTIR2016)
- 2016 Best Presentation Award at ACM SIGIR Conference on Research and Development in Information Retrieval Doctoral Consortium (SIGIR-DC2016)
- 2016 ACM SIGIR Student Travel Grant for Attending International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR2016)
- 2016 ACM SIGIR Student Travel Grant for Attending ACM SIGIR Conference on Human Information Interaction and Retrieval (CHIIR2016)
- 2015 Researcher Grant for attending Creative Camp #3 at Talk of Europe
- 2015 ACM SIGIR Student Travel Grant for Attending ACM SIGIR International Conference on the Theory of Information Retrieval (ICTIR2015)
- 2015 Student Travel Grant for attending Autumn School 2015 for Information Retrieval and Information Foraging (ASIRF2015)
- 2015 Student Travel Grant for attending Living Labs for IR Evaluation (LL4IR)
- 2015 Student Registration Grant for attending Conference and Labs of the Evaluation Forum (CLEF2015)
- 2015 Best Poster Award, European Conference on Information Retrieval (ECIR2015)
- 2015 Student Travel Grant for attending European Conference on Information Retrieval (ECIR2015)
- 2013 Iran Telecommunication Research Center (ITRC) Scholarship, Supporting M. Sc. Thesis.
- 2012 Ranked 13st in DATA MINING CUP Competition 2012, As the head of UNI_TEHRAN_1 team.
- 2010 Admission for M.Sc. study without Iranian Universities Entrance Exam

2010 Best Bachelor Thesis Award, Shahrood University of Technology, Department of Computer Engineering and IT.

2010 Ranked 1st (Course Based GPA) among B.Sc. students of The Department of Computer Engineering and IT in Shahrood University of Technology.

2007-2010 Shahrood University of Technology Exceptional Talents Scholarship.

References

Available upon request.