

# Homa B. Hashemi

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PhD candidate  
Intelligent Systems Program  
University of Pittsburgh

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## RESEARCH INTERESTS

- Natural Language Processing
  - Machine Learning
  - Information Retrieval
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## EDUCATION

**University of Pittsburgh**, Pittsburgh, PA **Aug. 2011 - Dec. 2017**  
Ph.D., Intelligent Systems Program

- Dissertation: *Robust Parsing for Ungrammatical Sentences*
- Adviser: Dr. Rebecca Hwa

**University of Pittsburgh**, Pittsburgh, PA **Aug. 2011 - Apr. 2014**  
M.S., Intelligent Systems Program

- Adviser: Dr. Rebecca Hwa

**University of Tehran**, Tehran, Iran **Sept. 2008 - Feb. 2011**  
M.S., School of Electrical and Computer Engineering

- Thesis: *Using Comparable Corpora for English-Persian Cross Language Information Retrieval*
- Adviser: Dr. Azadeh Shakery

**Iran University of Science and Technology (IUST)**, Tehran **Sept. 2002 - Mar. 2007**  
B.S., School of Computer Engineering

- Thesis: *Modeling Reconfiguration in Pervasive Computing Environments*
  - Adviser: Dr. Mohsen Sharifi
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## WORK EXPERIENCE

**MModal Inc.**, Pittsburgh, PA USA **Summer Intern, June-Aug. 2016**  
• *Word sense disambiguation using recurrent neural networks*

**Yahoo! Inc.**, Sunnyvale, CA USA **Summer Intern, July-Aug. 2015**  
• *Query intent detection using convolutional neural networks*

**Fluential Inc.**, Sunnyvale, CA USA **Summer Intern, July-Aug. 2013**  
• *Domain specific spell checker and short text categorization using classification*

**Learning Research and Development Center**, University of Pittsburgh **May-June 2013**  
• *Providing a tool to compare students' first and second drafts of papers*

**Kishware Co. (Tosan Co.)**, Tehran, Iran **Apr-July 2011**  
• *Software engineer and developer of mobile banking application*

**Iran Telecommunication Research Center (ITRC)** **June-Oct. 2009**  
• *Research on creating a standard Web test collection for .ir domain*

**Kishware Co. (Tosan Co.)**, Tehran, Iran **July 2007-Feb. 2009**  
• *Software engineer and J2EE Developer of modern banking systems*

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## PUBLICATIONS

- [1] Homa B. Hashemi, Rebecca Hwa. Jointly Parse and Fragment Ungrammatical Sentences. *Thirty-Second AAAI Conference on Artificial Intelligence (AAAI)*, 2018.
- [2] Fan Zhang, Homa B. Hashemi, Rebecca Hwa, Diane Litman. A Corpus of Annotated Revisions for Studying Argumentative Writing. *Association for Computational Linguistics (ACL)*, 2017.
- [3] Fan Zhang, Rebecca Hwa, Diane J Litman, Homa B. Hashemi. ArgRewrite: A Web-based Revision Assistant for Argumentative Writings. *North American Chapter of the Association for Computational Linguistics (HLT-NAACL Demonstrations)*, 2016.

- [4] Homa B. Hashemi, Rebecca Hwa. An Evaluation of Parser Robustness for Ungrammatical Sentences. *Empirical Methods in Natural Language Processing (EMNLP)*, 2016.
- [5] Homa B. Hashemi, Rebecca Hwa. Parse Tree Fragmentation of Ungrammatical Sentences. *International Joint Conference on Artificial Intelligence (IJCAI)*, 2016.
- [6] Homa B. Hashemi, Amir Asiaee, Reiner Kraft. Query Intent Detection using Convolutional Neural Networks. *International Conference on Web Search and Data Mining, Workshop on Query Understanding*, 2016.
- [7] Homa B. Hashemi, Rebecca Hwa. A Comparison of MT Errors and ESL Errors. *9th Language Resources and Evaluation Conference (LREC)*, 2014.
- [8] Homa B. Hashemi, Christian D. Schunn. A Tool for Summarizing Students' Changes across Drafts. *12th International Conference on Intelligent Tutoring Systems (ITS)*, 2014.
- [9] Homa B. Hashemi, A. Shakery. Mining a Persian-English Comparable Corpus for Cross-Language Information Retrieval. *Information Processing & Management journal*, 2013.
- [10] Zahra Rahimi, Homa B. Hashemi. Turn-Taking Behavior in Human Tutoring Corpus. *16th International Conference on Artificial Intelligence in Education (AIED)*, 2013.
- [11] Homa B. Hashemi, A. Shakery, H. Faili. Creating a Persian-English Comparable Corpus. *Conference on Multilingual and Multimodal Information Access Evaluation (CLEF)*, 2010.
- [12] Homa B. Hashemi, N. Yazdani, A. Shakery, M. Pakdaman Naeini. Application of Ensemble Models in Web Ranking. *International Symposium on Telecommunications (IST)*, 2010.
- [13] M. Pakdaman Naeini , H. Taremian, Homa B. Hashemi. Stock Market Value Prediction using Neural Networks. *Computer Information Systems and Industrial Management Applications*, 2010.
- [14] Homa B. Hashemi, A. Shakery, M. Pakdaman Naeini. Protein Fold Pattern Recognition Using Bayesian Ensemble of RBF Neural Networks. *International Conference of Soft Computing and Pattern Recognition*, 2009.

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AWARDS

- Best graduate poster award, CS day, University of Pittsburgh, 2012.
- Arts and Sciences (A&S) Fellowship, University of Pittsburgh, 2011-2012.
- Ranked first among graduate students at University of Tehran, 2011.
- Iran Telecommunication Research Center (ITRC) Research Award, 2009.

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REVIEWER

- Conference on Computational Natural Language Learning (CoNLL) (2017)
- NIPS Workshop on Machine Learning for Health (ML4H) (2017)
- Workshop on Innovative Use of NLP for Building Educational Applications (BEA) (2017)
- Workshop on NLP Techniques for Educational Applications (NLPTEA) (2017)
- Language Resources and Evaluation (LREV) journal (2015)

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MAJOR  
GRADUATE  
COURSES

**University of Pittsburgh**

- Machine Learning
- Advanced Topics in NLP
- Natural Language Processing
- Design and Analysis of Algorithms

**Carnegie Mellon University**

- Machine Translation

**University of Tehran**

- Information Retrieval
- Data mining
- Advanced Software Engineering
- Advanced Database systems

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PROGRAMMING  
SKILLS

- Java (J2EE, J2SE, J2ME, Servlet, JSP, Hibernate), Python, C#.NET, Matlab, C, C++
- TensorFlow, LibLinear, Stanford NLP packages, Weka, MySQL, Oracle

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LANGUAGES

Persian: Native , English: Fluent , Arabic: Familiar