Altaf Rahman

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Field of Interest

Natural Language Processing, Machine Learning, Information Extraction, Information Retrieval, and Data Science.

Education

Ph.D. in Computer Science 08/2007 – 05/2012
The University of Texas at Dallas,
Dallas, Texas.
Advisor: Dr. Vincent Ng

Master of Science in Computer Science 08/2007 – 05/2010
The University of Texas at Dallas,
Dallas, Texas.
CGPA: 3.93 (out of 4.0)

Bachelor of Science in Computer Science and Engineering 07/2000 – 06/2005
Bangladesh University of Engineering and Technology (BUET),
Dhaka, Bangladesh.
CGPA: 3.81 (out of 4.0)

Employment

Yahoo Labs 07/2013 – 03/2017
Research Scientist
Web Search Team
Sunnyvale, California.
Search query understanding projects: query tagging, query interpretation ranking, entity popularity, query reformulation, parsing conversational dialogues to composable operators, query rewriting, vertical search triggering, quick link candidate generation/ranking.

Amazon.com Inc. 07/2012 – 02/2013
Software Development Engineer II
Core Recommendation Team, Search and Discovery Group
Seattle, Washington.
Responsible for algorithms to recommend products for users in different context.

The University of Texas at Dallas 08/2007 – 05/2012
Research/Teaching Assistant
Eric Johnson School of Engineering
Richardson, Texas.
Graded assignments and prepared solutions for Machine Learning, AI and DLD courses.

INRIA Rocquencourt - University of Paris Diderot 06/2011 – 09/2011
Research Intern
Supervisor: Dr. Pascal Denis
ALPAGE Group,
Paris, France
Worked on consolidation and distribution (via the INRIA forge) of a generic library for automatic coreference resolution in natural language processing and information extraction.

IBM TJ Watson Research Center 05/2010 – 08/2010
Research Intern
Supervisor: Dr. Radu Florian and Dr. Xiaoqiang Luo
Natural Language Systems Group,
Yorktown Heights, New York
Worked on a Coreference Resolution tool based on bell tree algorithm and maximum entropy machine learning model.

Google Inc 05/2008 – 08/2008
Software Engineer Intern,
Google AdSense Team,
Mountain View, California
Worked on Google AdSense content ad front-end server.

Awards and Achievements

- **LEAP** (Lab Excellence Award Program) award by Yahoo Labs. (Feb 2014)
- **Certificate of Academic Excellence** for "Outstanding Academic Performance in the Computer Science Graduate Program" by Department of Computer Science, the University of Texas at Dallas. (May 2012)
- **REUSSI** Grant: Funded by the National Science Foundation (NSF) and INRIA. (June 2011)
- EACL 2012 Conference **Studentship Award**. (March 2012)

Publications

Coreference Resolution

- **Altaf Rahman** and Vincent Ng, Translation-Based Projection for Multilingual Coreference Resolution, *Proceedings of **NAACL-2012**, Montreal, Canada.*
- **Altaf Rahman** and Vincent Ng, Coreference Resolution with World Knowledge, *Proceedings of **ACL-HLT 2011**, Portland, OR, USA.*
- **Altaf Rahman** and Vincent Ng, Ensemble-based Coreference Resolution, *Proceedings of **IJCAI-2011**, Barcelona, Spain.*
- **Altaf Rahman** and Vincent Ng, *Narrowing the Modeling Gap: A Cluster-Ranking Approach to Coreference Resolution, JAIR 2011, Volume 40, pages 469-521.*
- **Altaf Rahman** and Vincent Ng, Syntactic Parsing for Ranking-based Coreference Resolution, *Proceedings of **IJCNLP-2011**, Chiang Mai, Thailand.*
- **Altaf Rahman** and Vincent Ng, Supervised Models for Coreference Resolution, *Proceedings of **EMNLP-2009**, Singapore.*

Named Entity Recognition, Semantic Classifier, Information Status

- **Altaf Rahman** and Vincent Ng, Determining Fine-Grained Information Status of Noun Phrases, *Proceedings of **EACL-2012**, Avignon, France.*
- **Altaf Rahman** and Vincent Ng, Learning the Information Status of Noun Phrases in Spoken Dialogues, *Proceedings of **EMNLP-2011**, Edinburgh, Scotland.*
- **Altaf Rahman** and Vincent Ng, Inducing Fine-Grained Semantic Classes via Hierarchical and Collective Classification, *Proceedings of **COLING-2010**, Beijing.*
- Kazi Saidul Hasan, **Altaf Rahman** and Vincent Ng, Learning-based Named Entity Recognition for morphologically-rich, resource-scarce languages, *Proceeding of **EACL-2009**, Athens, Greece.*

Data Mining

- Jingyuan Zhang, Luo Jie, **Altaf Rahman**, Sihong Xie, Yi Chang, and Philip S. Yu, Learning Entity Types from Query Logs via Graph-Based Modeling, *Proceedings of **CIKM 2015**, Melbourne, Australia.*

Ph.D. Thesis

Altaf Rahman, *Noun Phrase Coreference Resolution: A Knowledge-rich, Cluster-based Approach,* May 2012.

Bachelor's Thesis

Altaf Rahman, *Graph theory: Study on the Class of Spanning Trees,* April 2005.

Key Projects

- **QLAS:** A search query understanding tool for Yahoo Search.
- **CherryPicker:** A Coreference Resolution Tool for Natural Language Processing tasks. (Java/C++)
- **CAFÉ**: Content Ad Front End Server with Content Ad Target 2 (CAT2) Server for Google AdSense. (C++/Python)
- Named Entity Recognition (**NER**) system for Asian Language based on Wikipedia and CRF model. (Java/C++)

Technical Skills

- Programming Languages: Python, Java, C/C++, Hive, Pig, ...
- Machine Learning Tools: TensorFlow, VW, Caffe, Mahout, Mallet, libFM, SVM^{light}, CRF++, scikit, ...

Mentoring

- Jingyuan Zhang, a research intern in Yahoo Labs. (Summer 2014)

Professional Services

Program Committee Member

- Association for Computational Linguistics (ACL): 2012, 2013, 2014, 2015, 2016, 2017
- Conference on Empirical Methods in Natural Language Processing (EMNLP): 2014, 2015, 2016, 2017
- Conference of the North American chapter of the Association for Computational Linguistics (NAACL): 2016
- Conference of the European chapter of the Association for Computational Linguistics (EACL): 2014, 2017
- International Joint Conference on Natural Language Processing (IJCNLP): 2011, 2017
- International Joint Conference on Artificial Intelligence (IJCAI): 2011

Journal Reviewer

- Pattern Recognition Letters (PRLETTERS), Neurocomputing (NEUROCOM), Computer Speech and Language (CSL), IEEE Transactions on Knowledge and Data Engineering (TKDE)