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#### Education

Doctor of Philosophy

Expected in December 2016

School of Interactive Computing, College of Computing

GPA: 3.92/4.0

Jan. 2013 - present

Advisor: Jacob Eisenstein

Georgia Institute Technology, Atlanta, GA

Bachelor of Science Sep.2007 - Jun.2011

School of Software GPA: 3.70/4.0, Rank: 2/144

Beihang University, Beijing, China

# $\begin{array}{c} \textbf{Research} \\ \textbf{Experience} \end{array}$

Graduate Research Assistant
Computational Linguistics Lab
School of Interactive Computing
Georgia Institute of Technology, Atlanta, GA

• Personalized Natural Language Processing

- Community-specific embedding projections for Twitter sentiment analysis.

 Socially-infused information extraction by embedding users, mentions, and entities.

• Unsupervised Domain Adaptation for Structured Prediction

- Feature embedding for unsupervised multi-domain adaptation.

 Representation learning through marginalized denoising autoencoders with structured dropout noise.

- Part-of-Speech tagging for historical English.

• Token-based Unsupervised Text Normalization

- Defined a log-linear model for unsupervised text normalization.

- Approximated target distributions with Sequential Monte Carlo.

### Work Experience

Research Intern

Machine Learning Department

Mentor: Scott Wen-tau Yih

May. 2015 - Aug. 2015

May. 2014 - Aug. 2014

Mentor: Ming-Wei Chang

Microsoft Research Redmond, WA

• Presented WikiQA, a new dataset for open-domain question answering.

• Proposed a novel deep learning algorithm for answer sentence selection.

Research Intern Internet Services Research Center (ISRC) Group Microsoft Research Redmond, WA

Proposed Structured Multiple Additive Regression Trees (S-MART) for fast non-linear structured learning.

• Proposed a global joint model for tweet entity linking.

Research Scientist Intern

May. 2013 - Jul. 2013 & May. 2012 - Aug. 2012

Speech Group & NLU Group

Amazon, inc. Seattle, WA

May. 2013 - Jul. 2013 & May. 2012 - Aug. 2012

Mentor: Bjoern Hoffmeister & Imre Kiss

• Improved confusion network decoding for Automatic Speech Recognition (ASR).

• Improved confidence modeling for language understanding with ASR output.

• Proposed a SMT based approach for Named Entity Recognition.

#### **Publications**

Yi Yang Ming-Wei Chang and Jacob Eisenstein. Toward Socially-Infused Information Extraction: Embedding Authors, Mentions, and Entities. To appear in Conference on Empirical Methods in Natural Language Processing (EMNLP), 2016 (Full Paper)

Yi Yang and Jacob Eisenstein. Part-of-Speech Tagging for Historical English. In Proceedings of the 2016 Conference of the North American Chapter of the Association for Computational Linguistics (NAACL), 2016 (Oral Full Paper)

Yi Yang and Jacob Eisenstein. Putting Things in Context: Community-specific Embedding Projections for Sentiment Analysis. Technical Report, 2015

Yi Yang, Wen-tau Yih and Christopher Meek. WikiQA: A Challenge Dataset for Open-Domain Question Answering. In Proceedings of Conference on Empirical Methods in Natural Language Processing (EMNLP), 2015 (Short Oral Paper)

Yi Yang and Ming-Wei Chang. S-MART: Novel Tree-based Structured Learning Algorithms Applied to Tweet Entity Linking. In Proceedings of the 53rd Annual Meeting of the Association for Computational Linguistics (ACL), 2015 (Full Oral Paper)

Yi Yang and Jacob Eisenstein. Unsupervised Multi-Domain Adaptation with Feature Embeddings. In Proceedings of the 2015 Conference of the North American Chapter of the Association for Computational Linguistics (NAACL), 2015 (Full Paper)

Yi Yang and Jacob Eisenstein. Unsupervised Domain Adaptation with Feature Embeddings. In Proceedings of the 3rd International Conference on Learning Representations (ICLR), 2015 (Workshop Paper)

Yi Yang and Jacob Eisenstein. Fast Easy Unsupervised Domain Adaptation with Marginalized Structured Dropout. In Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics (ACL), 2014. (Short Paper)

Yi Yang and Jacob Eisenstein. A Log-Linear Model for Unsupervised Text Normalization. In Proceedings of Conference on Empirical Methods in Natural Language Processing (EMNLP), 2013. (Full Oral Paper)

Yi Yang and Lambert Mathias. A statistical machine translation approach to entity recognition. In Proceedings of Amazon Conference on Machine Learning, 2013

Fangtao Li, Minlie Huang, Yi Yang and Xiaoyan Zhu. Learning to Identify Review Spam. In Proceedings of the Twenty-Second International Joint Conference On Artificial Intelligence (IJCAI), 2011. (Full Oral Paper)

Minlie Huang, **Yi Yang** and Xiaoyan Zhu. Quality-biased Ranking of Short Texts in Microblogging Services. In Proceedings of the 5th International Joint Conference on Natural Language Processing (IJCNLP), 2011 (Full Oral Paper)

Rezarta Islamaj Doan, **Yi Yang**, Aurlie Nvol, Minlie Huang and Zhiyong Lu. Identifying protein-protein interactions in biomedical text articles. *In Proceedings of the Third BioCreative Challenge Evaluation Workshop*, 2010

#### Selected Talks

Invited Talk, June 2016. "Toward Robust Text Analysis for Language Variation" University of Pennsylvania; Bloomberg L.P.; Baidu Research

Conference Talk, June 2016. "Part-of-Speech Tagging for Historical English." NAACL 2016

Invited Talk, May 2016. "Efficiently Learning and Applying Dense Feature Representations for Natural Language Processing" *IBM research*; Allen Institute for Artificial Intelligence

Guest lecture, December 2015. "Domain Adaptation for Natural Language Processing." CS 4650/7650, Natural Language Processing

Conference Talk, July 2015. "S-MART: Novel Tree-based Structured Learning Algorithms Applied to Tweet Entity Linking."  $ACL\ 2015$ 

Guest lecture, March 2015. "Deep Learning of Representations for Domain Adaptation." CS8803DL, Deep Learning for Perception

Intern Talk, August 2014. "Improved Tweet Entity Linking with Structured Gradient Tree Boosting." NLP reading group, MSR; ISRC group meeting, MSR

Conference Talk, October 2013. "A Log-Linear Model for Unsupervised Text Normalization."  $EMNLP\ 2013$ 

Intern Talk, August 2012. "A statistical machine translation approach to entity recognition." Amazon Tech Talk series

## Teaching Experience

| • Computational Journalism      | Spring 2016 |
|---------------------------------|-------------|
| • Intro to Enterprise Computing | Spring 2013 |
| • J2EE Architecture             | Spring 2011 |
| • Java Programming Language     | Fall 2010   |
| • Algorithm Analysis & Design   | Fall 2009   |

## Computer Skills

- Programming Language: Python, Java, Matlab, C++, C#, R
- Web Technologies: HTML, CSS, ASP, JavaScript, JSP
- Databases: SQL Server, Oracle, MySql
- Tools: Theano, Hadoop, Mallet, Indri, Lucene

## Professional Services

- Program Committee Member: ACL 2016, WNUT 2016, SocialNLP 2016, Workshop on Human-Computer QA 2016, EMNLP 2015, ACL 2015, ACL 2014
- Conference Review: CONLL 2014, EMNLP 2013, ICDCS 2012, WWW 2011

## Selected Honors

| • ACL Student Volunteer   | 2015 |
|---|------|
| Georgia Tech GSC Travel Grant   | 2015 |
| ACL Outstanding Reviewer  | 2015 |
| • NAACL Student Volunteer   | 2015 |
| • ACL Student Travel Awards   | 2014 |
| • EMNLP Student Volunteer   | 2013 |
| • Excellent Student of Beihang University (Top 1%)                        | 2010 |
| • First Prize for Academic Excellent Student (Top 2%), Beihang University | 2010 |
| • Ranked 7th in ACM Programming Contest, Beihang University               | 2009 |
| • First Prize for Innovative Student (Top 2%), Beihang University         | 2009 |
| • National Scholarship (Top 2%), P.R.China                                | 2009 |