Mo Yu Curriculum vitae

CONTACT INFORMATION

Ph.D Student School of Computer Science Harbin Institute of Technology

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RESEARCH INTERESTS Natural Language Processing: Information Extraction, Parsing, Cross-lingual Methods

**Machine Learning:** Representation Learning (including Deep Learning), Semi-supervised Learning, Convex Optimization

**EDUCATION** 

## Harbin Institute of Technology, Harbin, China

Ph.D., Computer Science and Technology, to present

- Adviser: Professor Tiejun Zhao
- Area of Study: Machine Learning and its applications to NLP

M.S., Computer Science and Technology, July 2011

- Adviser: Professor Tiejun Zhao
- Area of Study: Machine Learning and its applications to NLP

B.S., Computer Science and Technology, School of Honor, July 2009

PROFESSIONAL EXPERIENCE

### Johns Hopkins University, Baltimore, MD

#### Visiting Student

#### December 2013 to present

- Advisers: Professor Mark Dredze and Professor Raman Arora
- Learning structured representations for NLP, with relation extraction and phrase similarity as particular focuses.
- Joint learning strategies for task-specific word embeddings.

### Natural Language Processing Group, Baidu Inc, Beijing, China

#### Research Intern

#### May 2012 to December 2013

- Learning syntactic representations (Advised by Prof. Tong Zhang).
- Online learning algorithms for problems with structured predictions (Advised by Prof. Tong Zhang).
- Development of dependency parsers.
- Learning strategies for task-specific word embeddings, and applications of word embeddings to NER, Chinese POS-tagging and cross-lingual projection.

## Natural Language Computing Group, Microsoft Research Asia, Beijing, China

#### Research Intern

#### Augues 2010 to December 2010

- Research on Twitter sentiment analysis.
- Designed target-dependent Twitter sentiment analysis pipeline for the QuickView project.

#### Web Search & Mining Group, Microsoft Research Asia, Beijing, China

## Research Intern

## December 2008 to August 2009

- Re-ranking for image retrieval.
- Intelligent advertising based on users' photo collections.

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#### **PUBLICATIONS**

- Mo Yu, Matthew Gormley, Mark Dredze. Factor-based Compositional Embedding Models. The NIPS 2014 workshop on Learning Semantics.
- [2] Tuo Zhao\*, Mo Yu\*, Yiming Wang, Raman Arora, Han Liu. Accelerated Mini-batch Randomized Block Coordinate Descent Method. (Both authors contributed equally.) (NIPS) 2014.
- [3] Mo Yu, Mark Dredze. Improving Lexical Embeddings with Semantic Knowledge. Association for Computational Linguistics (ACL), 2014, short papers
- [4] Mo Yu, Tiejun Zhao and Yalong Bai, Hao Tian, Dianhai Yu. Cross-lingual Projections between Languages from different Families. Association for Computational Linguistics (ACL), 2013, short papers
- [5] Mo Yu, Tiejun Zhao, Daxiang Dong, Hao Tian, Dianhai Yu: Compound Embedding Features for Semi-supervised Learning. North American Chapter of the Association for Computational Linguistics (NAACL), 2013, short papers
- [6] Mo Yu, Tiejun Zhao, Yalong Bai. Learning Domain Differences Automatically for Dependency Parsing Adaptation. (IJCAI), 2013
- [7] Mo Yu, Tiejun Zhao, Penglong Hu. A Theoretical Analysis on Structured Learning with Noisy Data and its Applications. Journal of Software. 2013 (In Chinese)
- [8] Lemao Liu, Hailong Cao, Taro Watanabe, Tiejun Zhao, Mo Yu, Conghui Zhu. Locally Training the Log-Linear Model for SMT. EMNLP-CoNLL 2012
- [9] Long Jiang, Mo Yu, Ming Zhou, Xiaohua Liu, Tiejun Zhao. Target-dependent Twitter Sentiment Classification. Association for Computational Linguistics (ACL), 2011
- [10] Mo Yu, Shu Wang, Conghui Zhu, Tiejun Zhao: Semi-supervised learning for word sense disambiguation using parallel corpora. FSKD 2011
- [11] Penglong Hu, Mo Yu, Jing Li, Conghui Zhu, Tiejun Zhao: Semi-supervised Learning Framework for Cross-Lingual Projection. Web Intelligence/IAT Workshops 201
- [12] Huashen Liang, Lemao Liu, Mo Yu, Yupeng Liu, Penglong Hu, Tingting Li, Chunyue Zhang, Hailong Cao, Tiejun Zhao. Technique reports of HIT-Machine Intelligence & Translation Lab for CWMT2011 (In Chinese)
- [13] Yu-Heng Ren, Mo Yu, Xin-Jing Wang, Lei Zhang, Wei-Ying Ma, Diversifying Landmark Image Search Results by Learning Interested Views from Community Photos WWW2010 demo papers.
- [14] Han Xi-Wu, Yu Mo, Zhu Cong-Hui, and Zhao Tie-Jun. A Sequence Kernel Method for Chinese Subcategorization Analysis. Chinese Journal of Electronics. Vol.19, No.3, July 2010.
- [15] Zhen Li, Hanjing Li, Mo Yu, Tiejun Zhao, Sheng Li: Event Entailment Extraction Based on EM Iteration. IALP 2010
- [16] Xin-Jing Wang, Mo Yu, Lei Zhang, Wei-Ying Ma, Argo: Intelligent Advertising Made Possible from Users' Photos. ACM MM09 Proceedings (demo paper).
- [17] Xin-Jing Wang, Mo Yu, Lei Zhang, Wei-Ying Ma. Advertising based on users' photos. IEEE ICME 2009 workshop.
- [18] Xin-Jing Wang, Mo Yu, Lei Zhang, Rui Cai, Wei-Ying Ma. Argo: Intelligent Advertising by Mining a User's Interest from His Photo Collections. ADKDD2009.
- [19] Cong-Hui Zhu, Mo Yu, Tie-Jun Zhao. Chinese Word Segmenter Based on Discriminative Classifiers Integration. Journal of Computational Information Systems3:5(2008).

#### **GRANTS**

### Cross-lingual projection based on semi-supervised structured learning.

- Natural Science Foundation of China (NSFC: 61173073) in the year 2012.
- Wrote the proposal with Prof. Tiejun Zhao.
- Taking charge of works related to the funding.

### STUDENT ADVISING

#### Penglong Hu, 2012

Graduate student in Computer Science, Harbin Institute of Technology. Semi-supervised Structured Learning for Pos-tag Projection across Languages. Primary adviser: Tiejun Zhao.

#### Jing Li, 2011

Undergraduate students in Computer Science, Harbin Institute of Technology. Pivot-Based Statistical Machine Translation. Primary adviser: Conghui Zhu.

## TEACHING EXPERIENCE

# Johns Hopkins University, Baltimore, MD

#### Grader

### Spring Semester 2014 and Fall Semester 2014

• Graded writeup assignments and final projects (CS 475).

### HIT-MSRA Summer School of Natural Language Processing, Harbin, China

### **Teaching Assistant**

August 2011

- Head TA of the "parsing" course lectured by Prof. John Carroll.
- Took part in designing the project of the course.

### Harbin Institute of Technology, Harbin, China

### Teaching Assistant

#### Fall Semester 2008 and Fall Semester 2009

- Head TA of the Formal Language and Automata instructional team.
- Designed weekly write-ups and the programming assignments.
- Graded assignments and led TA sessions.

## OTHER MEETING ATTENDANCE

### **Invited Participant**

• 2nd Heidelberg Laureate Forum (HLF), September 21–26, 2014

#### SERVICE

# HIT IBM Tech Club, Harbin Institute of Technology, 2006-to present

- President of HIT IBM Tech Club, 2007-2008
- Organized the Seminar of "Computer Systems: A Programmer's Perspective" and gave lectures, 2007–2008
- Interviewed prospective members, 2007-2011

#### Harbin Linux User Group (HLUG), 2009-2011

- President of HLUG, 2009–2010
- Organized the Day of Open Sources, 2010.

#### AWARDS

- Excellent Intern Award in Baidu NLP Group, 2012
- Excellent Master Dissertation Award, 2011
- Excellent Undergraduate Dissertation Award, 2009
- Excellent Certification for Interns at MSRA, 2009
- Microsoft Young Fellowship Award by MSRA, 2008

#### SKILLS

## Computer Programming: C, C++, C#, python, perl, java, MATLAB

Tools: Vim, Xcode, Eclipse, TEX (LATEX, BIBTEX), Git

Operating Systems: Linux, Apple OS X, Microsoft Windows family