

## Yijia Liu

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Ph.D. candidate, *Language analysis* group in HIT-SCIR  
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### RESEARCH INTEREST

Natural language processing, Chinese word segmentation, parsing and machine learning. My supervisor is Wanxiang Che.

### EDUCATION

*Ph.D. candidate*, Harbin Institute of Technology 2014.9 - present  
Major: Computer Science

*Visiting student*, University of Washington 2016.10 - 2017.9  
Supervisor: Noah A. Smith

*M.S.*, Harbin Institute of Technology 2012.9 - 2014.7  
Major: Computer Science, Score: 79.14 (rank top 10%)

*B.E.*, Harbin Institute of Technology 2008.9 - 2012.7  
Major: Computer Science, Score: 88.7 (rank top 8%)

### PUBLICATION

Yutai Hou, **Yijia Liu**, Wanxiang Che and Ting Liu. 2018. Sequence-to-Sequence Data Augmentation for Dialogue Language Understanding. (to appear) In *Proceedings of the 27th International Conference on Computational Linguistics (COLING)*.

Haoyang Wen, **Yijia Liu**, Wanxiang Che, Libo Qin and Ting Liu, 2018. Sequence-to-Sequence Learning for Task-oriented Dialogue with Dialogue State Representation. (to appear) In *Proceedings of the 27th International Conference on Computational Linguistics (COLING)*.

**Yijia Liu**, Wanxiang Che, Huaipeng Zhao, Bing Qin, Ting Liu. 2018. Knowledge Distilling for Search-based Structured Prediction. (to appear) In *Proceedings of the 56th Annual Meeting of the Association for Computational Linguistics (ACL)*.

**Yijia Liu**, Yi Zhu, Wanxiang Che, Bing Qin, Nathan Schneder, and Noah A. Smith. 2018. Parsing Tweets into Universal Dependency. (to appear) In *Proceedings of the 2018 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL)*.

**Yijia Liu**, Wanxiang Che, Jiang Guo, Bing Qin, and Ting Liu. 2016. Exploring Segment Representations for Neural Segmentation Models. In *Proceedings of the 25th International Joint Conference on Artificial Intelligence (IJCAI)*.

**Yijia Liu**, Wanxiang Che, Bing Qin, and Ting Liu. 2016. HC-search for Incremental Parsing. In *Proceedings of the 25th International Joint Conference on Artificial Intelligence (IJCAI)*.

**Yijia Liu**, Yue Zhang, Wanxiang Che, and Ting Liu. 2015. Transition-Based Syntactic Linearization. In *Proceedings of the 2015 Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*.

**Yijia Liu**, Yue Zhang, Wanxiang Che, and Ting Liu. 2014. Domain Adaptation for CRF-based Chinese Word Segmentation using Free Annotations, In *Proceedings of the 2014 Conference on Empirical Methods in Natural Language Processing (EMNLP)*.

**Yijia Liu**, Wanxiang Che, and Ting Liu. 2013. Enhancing chinese word segmentation with character clustering. In *Chinese Computational Linguistics and Natural Language Processing Based on Naturally Annotated Big Data (CCL)*.

**Yijia Liu**, Meishan Zhang, Wanxiang Che, Ting Liu, and Yihe Deng. 2012. Micro blogs Oriented Word Segmentation System. In *Proceedings of the Second CIPS-SIGHAN Joint Conference on Chinese Language Processing*.

Meishan Zhang, Wanxiang Che, **Yijia Liu**, Zhenghua Li, Ting Liu. 2012. HIT dependency parsing: Bootstrap aggregating heterogeneous parsers. In *Notes of the First Workshop on Syntactic Analysis of Non-Canonical Language (SANCL)*.

## PATTERNS

Wanxiang Che, **Yijia Liu**, Ting Liu, and Yanyan Zhao. An Incremental Training Method for Domain Adaptation in Chinese Word Segmentation, CN201510604035.0.

## PROJECTS

**Language Technology Platform (LTP)** 2013.6 - present  
Project Homepage: <https://github.com/HIT-SCIR/ltp>. LTP is a software package that provides Chinese natural language processing pipeline along with web service API.

- one of the developers and the major maintainer of LTP.
- developed 4 modules including Chinese word segmentation, part-of-speech tagging, NER and dependency parsing in a perceptron algorithm framework.
- developed the RESTful API and contributed to the development of website (<http://ltp-cloud.com>).

**ZPar Project** 2013.10 - 2014.10  
Project Homepage: <http://sourceforge.net/projects/zpar/>. ZPar is statistical multi-language parser. ZPar provides integrated systems that perform word segmentation, part-of-speech tagging, dependency parsing or phrase structure parsing.

- developed transition based non-projective dependency parser.
- developed bug fixes.

## SERVICES

*Conference Reviewer/Secondary Reviewer*: ACL 2014, 2018, CCL 2015-2017, NLPCC 2015-2017, NAACL 2016, IJCAI 2016, SemEval 2016.

## EMPLOYMENT

*Research Assistance*, SUTD. 2013.10 - 2014.10  
worked with Dr. Yue Zhang, on statistical machine translation, Chinese tagging and transition based dependency parsing.

*Intern Researcher and Developer*, Baidu Inc., NLP Department. 2011.7 - 2011.11  
implemented query template extraction toolkit and built a python extension for baidu wordseg library.

## TEACHING EXPERIENCE

TA, High level Programming Language, fall, 2009, and fall, 2010  
TA, The Practice of Programming, spring, 2011, and spring, 2012

## TECHNIQUE SUMMARY

*Programming Languages*: C/C++, Java, Python, R, Shell  
*Operating Systems*: Linux (two-years experience as a part-time IT administrator)  
*Experience*: Git, SVN, Valgrind, Apache, Nginx, django (Python)

## AWARDS

*First Class Award* in HeiLongJiang Provincial Science and Technology Prizes:

The Language Technology Platform and its Applications	2016.10
Hua Wei Scholarship (for graduate student)	2016.9
The National Scholarship for graduate students	2013.9
2010 ACM/ICPC Asia Regional Contest Hangzhou Onsite, Silver Medal	2010.10
Hua Wei Scholarship (for undergraduate student)	2010.9