

Yijia Liu

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

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*. (ACL2018).

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* (NAACL2018).

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* (IJCAI2016).

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* (IJCAI2016).

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* (NAACL2015).

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* (EMNLP2014).

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* (CCL2013).

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