

Liyuan Liu

"I saw the angel in the marble and carved until I set him free. - Michelangelo"

Siebel Center for Computer Science Rm 2119B, 201 N. Goodwin Avenue, Urbana, IL 61801, USA

☎ (+1) 217-904-5914 | ✉ llychinalz@gmail.com | 🏠 liyuanlucasliu.github.io | 📷 LiyuanLucasLiu

RESEARCH INTEREST

Understand the underlying mechanism of neural NLP models & Make the training more automatic, robust, and thus more efficient.

EDUCATION

UNIVERSITY OF ILLINOIS, URBANA-CHAMPAIGN (UIUC)

PH.D. IN COMPUTER SCIENCE, EXPECTED JUNE. 2021

- Advisor: Prof. Jiawei Han

Illinois, USA

September 2016 – Present

UNIVERSITY OF SCIENCE AND TECHNOLOGY OF CHINA (USTC)

B.E. IN COMPUTER SCIENCE

- Advisor: Prof. Linli Xu
- Shortlisted for the Guo Moruo Scholarship and graduated *summa cum laude*.

Hefei, China

September 2012 – June 2016

HONORS & AWARDS

HIGHLIGHTS

Winner of the Topcoder Arabic NER Challenge 2018

- Ranked 1st among 137 registrants and 220 submissions.

Guo Moruo Scholarship 2015

- Highest honor for USTC undergraduate students.

Google Excellent Scholarship 2015

- Only 58 graduate and undergraduate students shortlisted nationwide.

SCHOLARSHIPS and AWARDS

Yee Fellowship Award 2020

Data Mining Group Research Award 2019, 2018, 2017

3th Place at WSDM Cup 2017 (Vandalism Detection Task) 2017

ICDM 2015 Travel Award 2015

Samsung Scholarship 2015

Tencent Innovative Scholarship 2014

Seagate Scholarship 2013

Scholarship for Outstanding Students 2012, 2013

HIGHLIGHT PROJECTS

RAdam 2000+ stars, 200+ forks.

LM-LSTM-CRF 700+ stars, 180+ forks.

AutoNER 200+ stars

LD-Net 100+ stars

Torch-Scope 30k+ downloads.

EXPERIENCE

AI Lab @ Tencent

RESEARCH INTERN

WA, USA

May 2020 – PRESENT

Data Mining Group @ UIUC

RESEARCH ASSISTANT, ADVISOR: PROF. JIAWEI HAN

IL, USA

September 2016 – PRESENT

Deep Learning Group @ MICROSOFT RESEARCH REDMOND

PART-TIME RESEARCHER, ADVISOR: DR. XIAODONG GU & DR. JIANFENG GAO

IL, USA

January 2020 – May 2020

D365 AI & MSR @ MICROSOFT

RESEARCH INTERN, ADVISOR: DR. WEIZHU CHEN & DR. JIANFENG GAO

WA, USA

May 2019 – August 2019

AllenNLP @ AI2

RESEARCH INTERN, ADVISOR: DR. MATTHEW E. PETERS

WA, USA

May 2018 – August 2018

Social Computing Group @ MICROSOFT RESEARCH ASIA

RESEARCH INTERN, ADVISOR: DR. RUIHUA SONG

Beijing, China

July 2015 – May 2016

Laboratory of Semantic Computing and Data Mining @ USTC

UNDERGRADUATE RESEARCHER, ADVISOR: PROF. LINLI XU

Anhui, China

October 2013 – June 2015

National Student Innovation Training Program @ USTC

PROJECT LEADER, ADVISOR: PROF. KAI XING

Anhui, China

April 2013 – May 2015

PROFESSIONAL SERVICE

PC Member ACL2020, WWW2020, AAAI2020, IJCAI2020, EMNLP2019, LLD2019, ACL2019, NAACL2019, AAAI2019, EMNLP2018

External Reviewer ACL2018, NAACL2018, WWW2018, AAAI2018, KDD2018, ACL2017, EMNLP2017, KDD2017

PUBLICATIONS

* indicates equal contribution.

- [1] Honglei Zhuang, Fang Guo, Chao Zhang, **Liyuan Liu**, and Jiawei Han. “Joint Aspect-Sentiment Analysis with Minimal User Guidance.” in *Proc. 2020 ACM SIGIR Int. Conf. on Research and development in Information Retrieval (SIGIR’20)*, to appear.
- [2] Yuning Mao, **Liyuan Liu**, Qi Zhu, Xiang Ren, and Jiawei Han. “Facet-Aware Evaluation for Extractive Summarization.” in *Proc. 2020 Annual Conf. of the Association for Computational Linguistics (ACL’20)*, to appear.
- [3] Ouyu Lan, Xiao Huang, Bill Yuchen Lin, He Jiang, **Liyuan Liu**, and Xiang Ren. “Learning to Contextually Aggregate Multi-Source Supervision for Sequence Labeling.” in *Proc. 2020 Annual Conf. of the Association for Computational Linguistics (ACL’20)*, to appear.
- [4] **Liyuan Liu**, Haoming Jiang, Pengcheng He, Weizhu Chen, Xiaodong Liu, Jianfeng Gao, and Jiawei Han. “On the Variance of the Adaptive Learning Rate and Beyond.” in *Proc. of 2020 Int. Conf. on Learning Representations (ICLR’20)*, to appear.
- [5] Jingbo Shang, Xinyang Zhang, **Liyuan Liu**, Sha Li and Jiawei Han. “NetTaxo: Automated Topic Taxonomy Construction from Large-Scale Text-Rich Network”, in *Proc. 2020 Int. World Wide Web Conf. (WWW’20)*, Taip (Oral)
- [6] Zihan Wang*, Jingbo Shang*, **Liyuan Liu***, Lihao Lu, Jiacheng Liu and Jiawei Han. “CrossWeigh: Training Named Entity Tagger from Imperfect Annotations” in *Proc. of 2019 Conf. on Empirical Methods in Natural Language Processing (EMNLP’19)*, Hong Kong, China, Nov. 2019 (Oral, Long).
- [7] Qinyuan Ye*, **Liyuan Liu***, Maosen Zhang, and Xiang Ren. “Looking Beyond Label Noise: Shifted Label Distribution Matters in Distantly Supervised Relation Extraction” in *Proc. of 2019 Conf. on Empirical Methods in Natural Language Processing (EMNLP’19)*, Hong Kong, China, Nov. 2019 (Oral, Long).

- [8] **Liyuan Liu**, Jingbo Shang, and Jiawei Han. “Arabic Named Entity Recognition: What Works and What’s Next” in *Proc. of the 4th Arabic Natural Language Processing Worksho (WANLP 2019)*, co-located with ACL 2019, Florence, Italy, July 2019 (Oral).
- [9] Ying Lin, **Liyuan Liu**, Heng Ji, Dong Yu, and Jiawei Han. “Reliability-aware Dynamic Feature Composition for Name Tagging” in *Proc. of the 57th Annual Meeting of the Association for Computational Linguistics (ACL’ 19)*, Florence, Italy, Jul. 2019 (Oral, Long).
- [10] Jingbo Shang, Jiaming Shen, **Liyuan Liu**, and Jiawei Han, “Constructing and Mining Heterogeneous Information Networks from Massive Text”, Conference tutorial at *2019 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD’19)*, Anchorage, AK, Aug. 2019.
- [11] Yujin Yuan, **Liyuan Liu**, Siliang Tang, Zhongfei Zhang, Yueting Zhuang, Fei Wu, and Xiang Ren. “Cross-relation Cross-bag Attention for Distantly-supervised Relation Extraction” in *Proc. of 2019 AAAI Conf. on Artificial Intelligence (AAAI’19)*.
- [12] Jingbo Shang*, **Liyuan Liu***, Xiaotao Gu, Xiang Ren, Teng Ren, and Jiawei Han “Learning Named Entity Tagger using Domain-Specific Dictionary.” in *Proc. of 2018 Conf. on Empirical Methods in Natural Language Processing (EMNLP’18)*, Brussels, Belgium, Oct. 2018.
- [13] **Liyuan Liu**, Xiang Ren, Jingbo Shang, Jian Peng, and Jiawei Han. “Efficient Contextualized Representation: Compressing Language Models for Sequence Labeling.” in *Proc. of 2018 Conf. on Empirical Methods in Natural Language Processing (EMNLP’18)*, Brussels, Belgium, Oct. 2018, (Oral, Long).
- [14] **Liyuan Liu**, Jingbo Shang, Frank Xu, Xiang Ren, Huan Gui, Jian Peng, and Jiawei Han. “Empower Sequence Labeling with Task-Aware Neural Language Model.” in *Proc. of 2018 AAAI Conf. on Artificial Intelligence (AAAI’18)*, New Orleans, LA, Feb. 2018.
- [15] **Liyuan Liu***, Xiang Ren*, Qi Zhu, Shi Zhi, Huan Gui, Heng Ji, and Jiawei Han. “Heterogeneous Supervision for Relation Extraction: A Representation Learning Approach.”, in *Proc. of 2017 Conf. on Empirical Methods in Natural Language Processing (EMNLP’17)*, Copenhagen, Denmark, Sept. 2017 (Oral, Long).
- [16] Chao Zhang, **Liyuan Liu**, Dongming Lei, Quan Yuan, Honglei Zhuang, Tim Hanratty, and Jiawei Han, “TrioVecEvent: Embedding-Based Online Local Event Detection in Geo-Tagged Tweet Streams”, in *Proc. of 2017 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD’17)*, Halifax, Nova Scotia, Canada, Aug. 2017 (Oral, Long).
- [17] Qi Zhu, Hongwei Ng, **Liyuan Liu**, Ziwei Ji, Bingjie Jiang, Jiaming Shen, and Huan Gui. “Wikidata Vandalism Detection—The Loganberry Vandalism Detector at WSDM Cup 2017”, in *WSDM Cup 2017 Notebook Papers (WSDM Cup’ 17)*, Feb. 10, Cambridge, UK.
- [18] **Liyuan Liu**, Linli Xu, Zhen Wang, and Enhong Chen, “Community Detection Based on Structure and Content: A Content Propagation Perspective”, in *Proc. of 2016 Int. Conf. on Data Mining (ICDM’16)*, Atlantic City, NJ, USA, Nov. 2015. (Oral, Long, AC rate: 18.1%)