Manling Li

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Educations

University of Illinois at Urbana-Champaign   *08/2019 - Present*
- Ph.D. in Computer Science. Advisor: Prof. Heng Ji

Rensselaer Polytechnic Institute   *08/2018 - 08/2019*
- Ph.D. in Computer Science. Advisor: Prof. Heng Ji

Insititute of Computing Technology, Chinese Academy of Sciences   *08/2015 - 06/2018*
- M.S. in Computer Science and Technology. Advisor: Prof. Yuanzhuo Wang

University of Science and Technology Beijing   *08/2011 - 06/2015*
- B.E. in Computer Science (Internet of Things), B.M. in Information Management and Information Systems (minor)

Experience

Microsoft Research, Cognitive Services Research group, Redmond, WA, USA   *05/2021 - 08/2021*
Mentor: Ruochen Xu

IBM Research, Foundations of AI Reasoning group, Yorktown Heights, NY, USA   *06/2020 - 08/2020*
Mentor: Tengfei Ma, Mo Yu

Research Interest

Natural Language Processing, with special focus on Knowledge Extraction, Reasoning, and Summarization from multimedia data

Publications

EMNLP'21	***Timeline Summarization based on Event Graph Compression via Time-Aware Optimal Transport***. Manling Li, Tengfei Ma, Mo Yu, Lingfei Wu, Tian Guo, Heng Ji, Kathleen McKeown. EMNLP 2021.
EMNLP'21	***The Future is not One-dimensional: Complex Event Schema Induction via Graph Modeling***. Manling Li, Sha Li, Zhenhailong Wang, Lifu Huang, Kyunghyun Cho, Heng Ji and Jiawei Han. EMNLP 2021.
EMNLP'21	***Joint Multimedia Event Extraction from Video and Article***. Brian Chen, Xudong Lin, Christopher Thomas, Manling Li, Shoya Yoshida, Lovish Chum, Heng Ji and Shih-Fu Chang. EMNLP 2021 Findings.
NAACL'21 Best Demo Paper	***COVID-19 Literature Knowledge Graph Construction and Drug Repurposing Report Generation***. Qingyun Wang, Manling Li, Xuan Wang, Nikolaus Parulian, Guangxing Han, Jiawei Ma, Jingxuan Tu, Ying Lin, etc Proceedings of the 2021 Conference of the North American Chapter of the Association for Computational Linguistics (*Demonstrations*)
NAACL'21	***RESIN: A Dockerized Schema-Guided Cross-document Cross-lingual Cross-media Information Extraction and Event Tracking System***. Haoyang Wen, Ying Lin, Tuan M. Lai, Xiaoman Pan, Sha Li, Xudong Lin, Ben Zhou, Manling Li, Haoyu Wang, Hongming Zhang, Xiaodong Yu, Alexander Dong, Zhenhailong Wang, Yi R. Fung, Proceedings of the 2021 Conference of the North American Chapter of the Association for Computational Linguistics (Demonstrations)
NAACL'21	***GENE: Global Event Network Embedding***. Qi Zeng, Manling Li, Tuan Lai, Heng Ji, Mohit Bansal and Hanghang Tong. Proceedings of NAACL-HLT2021 Workshop on Graph-Based Natural Language Processing
AAAI'21	***Event-centric Natural Language Understanding***. Muhao Chen, Hongming Zhang, Qiang Ning, Manling Li, Heng Ji and Dan Roth. Proc. The Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI2021) Tutorial.
EMNLP'20	***Connecting the Dots: Event Graph Schema Induction with Path Language Modeling***. Manling Li, Qi Zeng, Ying Lin, Kyunghyun Cho, Heng Ji, Jonathan May, Nathanael Chambers, Clare Voss. Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing.

ACL'20 Best Demo Paper	***GAIA: A Fine-grained Multimedia Knowledge Extraction System***. Manling Li*, Alireza Zareian*, Ying Lin, Xiaoman Pan, Spencer Whitehead, Brian Chen, Bo Wu, Heng Ji, Shih-Fu Chang, Clare R. Voss, Dan Napierski, Marjorie Freedman. Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics: System Demonstrations.
ACL'20	***Cross-media Structured Common Space for Multimedia Event Extraction***. Manling Li*, Alireza Zareian*, Qi Zeng, Spencer Whitehead, Di Lu, Heng Ji, Shih-Fu Chang. Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics, pp.2557–2568
TAC KBP'20	***GAIA at SM-KBP 2020 - A Dockerized Multi-media Multi-lingual Knowledge Extraction, Clustering, Temporal Tracking and Hypothesis Generation System***. Manling Li, Ying Lin, Tuan Manh Lai, Xiaoman Pan, Haoyang Wen, Sha Li, etc Text Analysis Conference Knowledge Base Population (TAC-KBP) Workshop 2020
TAC KBP'20	***UIUC TAC2020 RUFES System Description***. Revanth Gangi Reddy, Manling Li, Haoyang Wen and Heng Ji. Text Analysis Conference Knowledge Base Population (TAC-KBP) Workshop 2020
ACL'19	***Keep Meeting Summaries on Topic: Abstractive Multi-Modal Meeting Summarization***. Manling Li, Lingyu Zhang, Heng Ji, Rich Radke. Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics, pp.2190–2196
NAACL'19	***Multilingual Entity, Relation, Event and Human Value Extraction***. Manling Li, Ying Lin, Joe Hoover, Spencer Whitehead, Clare R. Voss, Morteza Dehghani, Heng Ji. Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics (Demonstrations), pp.110–115
TAC KBP'19	***GAIA at SM-KBP 2019 - A Multi-media Multi-lingual Fine-Grained Knowledge Extraction and Hypothesis Generation System***. Manling Li, Ying Lin, Ananya Subburathinam, Spencer Whitehead, Xiaoman Pan, Di Lu, Qingyun Wang, Tongtao Zhang, Lifu Huang, Heng Ji , etc. Text Analysis Conference Knowledge Base Population (TAC-KBP) Workshop 2019
TAC KBP'19	***A Baseline Fine-Grained Entity Extraction System for TAC-KBP2019***. Ying Lin, Xiaoman Pan, Manling Li, Heng Ji , etc. Text Analysis Conference Knowledge Base Population (TAC-KBP) Workshop 2019
ACM MMSys'19	***The Unobtrusive Group Interaction (UGI) Corpus***. Indrani Bhattacharya, Michael Foley, Ni, Tongtao Zhang, Christine Ku, Cameron Mine, Manling Li, Heng Ji, etc. Proceedings of the 10th ACM Multimedia Systems Conference, pp.249-254
TAC KBP'18	***GAIA - A Multi-media Multi-lingual Knowledge Extraction and Hypothesis Generation System***. Tongtao Zhang, Ananya Subburathinam, Ge Shi, Lifu Huang, Di Lu, Xiaoman Pan, Manling Li, Boliang Zhang, Qingyun Wang, Spencer Whitehead, Heng Ji, etc. Text Analysis Conference Knowledge Base Population (TAC-KBP) Workshop 2018
WWW'18	***Hierarchical Types Constrained Topic Entity Detection for Knowledge Base Question Answering***. Yunqi Qiu, Manling Li, Yuanzhuo Wang, Yantao Jia.The Web Conference 2018, pp.35-36 (abstract)
AAAI'18	***Path-Based Attention Neural Model for Fine-Grained Entity Typing***. Denghui Zhang, Manling Li, Pengshan Cai, Yantao Jia, Yuanzhuo Wang. The 32nd AAAI Conference on Artificial Intelligence, pp.8179-8180 (abstract)
IEEE Trans	***Link Prediction in Knowledge Graphs: A Hierarchy-Constrained Approach***. Manling Li, Yuanzhuo Wang, Denghui Zhang, Yantao Jia, Xueqi Cheng. IEEE Transactions on Big Data, pp.1-14
WI'17	***Efficient Parallel Translating Embedding For Knowledge Graphs***. Denghui Zhang, Manling Li, Yantao Jia, Yuanzhuo Wang, Xueqi Cheng. The IEEE/WIC/ACM International Conference on Web Intelligence 2017, pp.460-468
TAC KBP'16	***OpenKN at TAC KBP 2016***. Manling Li, Xinlei Chen, Yantao Jia, Yuanzhuo Wang, etc. TAC KBP Workshop 2016
WWW'16	***Hierarchy-Based Link Prediction in Knowledge Graphs***. Manling Li, Yantao Jia, Yuanzhuo Wang, Jingyuan Li, Xueqi Cheng. The 25th International Conference Companion on World Wide Web, pp.77-78 (abstract)
AAAI'16	***Predicting Links and Their Building Time: A Path-Based Method***. Manling Li, Yantao Jia, Yuanzhuo Wang, Zeya Zhao, Xueqi Cheng. The Thirtieth AAAI Conference on Artificial Intelligence, pp.4228-4229 (abstract)
Patent	***An Ontology Alignment Algorithm Based on Knowledge Graph Embedding***. 1st student author. No. CN108694201A
Patent	***A Relation Inference System Based on Knowledge Graph Embedding***. 1st student author. No. CN106909622A
Patent	***A Tag Inference System Based on Knowledge Graph Embedding***. 2nd student author. No.CN107391577A
Patent	***A Fine-Grained Classification Method for Knowledge Base***. 2nd student author. No. CN104615687B
Patent	***An Attribute Extraction Method for Web Pages***. 2nd student author. No. CN104636466A

Patent   *Knoweldge Graph Compression*. <u>1st author</u>. No. P202007467US01

Invited Talks

Structural Event Knowledge Acquisition from Multimedia Data , USC ISI. Dec 2022.

Comprehensive Event Understanding in Multimedia Data , UIUC NLP Seminar. Nov 2022.

Event Extraction and Reasoning in Multimedia News Data , Microsoft Research. Nov 2022.

Event-centric Natural Language Processing Tutorial at ACL2021. Aug 2022.

Visual Event Understanding with Contrastive Image-Language Pretraining , Microsoft Research. Aug 2022.

Event-centric Natural Language Understanding.   Tutorial at AAAI2021. Feb, 2022.

Fine-Grained Knowledge Extraction System from Multimedia Data , ai.science. Oct 2021.

Event Understanding and Narration for Multimedia Data , Intel MDI Research Lab. May 2021.

Honors

Selected Awards
- ACL 2020 Best Demo Paper Award
- NAACL 2021 Best Demo Paper Award
- Mavis Future Faculty Fellow
- C.L. and Jane Liu Award

Selected Scholarships
- Microsoft Research PhD Fellowship
- National Scholarship
- Chinese Academy of Sciences First Class Scholarship

Selected Academic Competitions and Evaluations
- Ranked 1st in TAC Streaming Multimedia Knowledge Base Population (SM-KBP) 2019, with more than 10% absolute gains compared the second ranked team
- Ranked 1st in TAC Streaming Multimedia Knowledge Base Population (SM-KBP) 2020
- 1st prize in National Computer Game Tournament (Connect Six)
- 1st prize in National Software Innovation Competition
- 2nd prize in National Computer Design Competition
- 2nd Prize in National Computer Game Tournament (Nogo)
- 2nd prize in Student Research Training Program of China

Services

Journal Reviewer
- IEEE MultiMedia ; Journal of Artificial Intelligence Research

Senior PC Member
- IJCAI'21

PC Member
- ACL Rolling Review'22; WWW'22; AAAI'22; EMNLP'21; ACL'21; AAAI'21; WWW'21; AKBC'21, EACL'21; KDD'21 DI Workshop; NLPCC 2021; COLING'20; AACL'20; CCL'20