Manling Li

Northwestern University, Computer Science Department, 2233 Tech Dr, Evanston, IL 60208

📱 (+1) 650-283-2881 | ✉ manling.li@northwestern.edu | 🏠 https://limanling.github.io/

Professional Experiences

Northwestern University, Computer Science Department   *2023.09 - Present*
- Assistant Professor (Adjunct 2023.09-2024.09, Full-time 2024.09-)

Stanford University, Computer Science Department   *2023.09 - 2024.08*
- Postdoc (2023.09-2024.09), Visiting Researcher (2024.09-), working with Prof Jiajun Wu and Prof Fei-Fei Li

Educations

University of Illinois at Urbana-Champaign, USA   *2023*
- Ph.D. in Computer Science
- Advisor: Prof. Heng Ji. Thesis Committee: Jiawei Han, Chengxiang Zhai, Kyunghyun Cho, Shih-Fu Chang
- Thesis Title: Event-Centric Multimodal Knowledge Acquisition

University of Chinese Academy of Sciences, China   *2018*
- M.S. in Computer Science

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

Selected Awards

- **ACL 2024 Outstanding Paper Award**
- **SoCal NLP 2024 Best Paper Award**
- **ACL 2020 Best Demo Paper Award**
- **NAACL 2021 Best Demo Paper Award**
- **DARPA Riser** in 2022 (nominated by DARPA)
- **Microsoft Research PhD Fellowship** in 2021
- **EE CS Rising Star** in 2022
- Mavis Future Faculty Fellow 2021-2022
- C.L. and Jane Liu Award in 2019 (awarded one student for exceptional research potential in UIUC CS department)
- Ranked 1st in TAC Streaming Multimedia Knowledge Base Population (SM-KBP) 2019 and 2020

Selected Publications

Google Scholar: https://scholar.google.com/citations?user=6U4SXnUAAAAJ&hl=en

[P23] **RAGEN: Training Agents by Reinforcing Reasoning**
Zihan Wang*, Kangrui Wang*, Qineng Wang*, Pingyue Zhang*, Linjie Li*, Zhengyuan Yang, Kefan Yu, Minh Nhat Nguyen, Monica Lam, Yiping Lu, Kyunghyun Cho, Jiajun Wu, Li Fei-Fei, Lijuan Wang, Yejin Choi, **Manling Li**
arXiv. Open-Source RL Agent framework with **1.7k Github Stars** https://ragen-ai.org

[P22] **T*: Re-thinking Temporal Search for Long-Form Video Understanding**
Jinhui Ye, Zihan Wang, Haosen Sun, Keshigeyan Chandrasegaran, Zane Durante, Cristobal Eyzaguirre, Yonatan Bisk, Juan Carlos Niebles, Ehsan Adeli, Li Fei-Fei, Jiajun Wu, **Manling Li**
CVPR 2025

[P21] **Embodied Agent Interface: Benchmarking LLMs for Embodied Decision Making**
Manling Li*, Shiyu Zhao*, Qineng Wang*, Kangrui Wang*, Yu Zhou*, Sanjana Srivastava, Cem Gokmen, Tony Lee, Li Erran Li, Ruohan Zhang, Weiyu Liu, Percy Liang, Li Fei-Fei, Jiayuan Mao, Jiajun Wu
NeurIPS 2024 Oral (0.4%), SoCal NLP 2024 Best Paper Award

[P20] **Chain-of-Action: Faithful and Multimodal Question Answering through Large Language Models**
Zhenyu Pan, Haozheng Luo, <u>**Manling Li**</u>, Han Liu
ICLR 2025

[P19] **HourVideo: 1-Hour Video-Language Understanding**
Keshigeyan Chandrasegaran, Agrim Gupta, Taran Kota, Lea M. Hadzic, Jimming He, Cristobal Eyzaguirre, Zane Durante, <u>**Manling Li**</u>,
Jiajun Wu, Li Fei-Fei
NeurIPS 2024

[P18] **IKEA Manuals at Work: 4D Grounding of Assembly Instructions on Internet Videos**
Yunong Liu, Weiyu Liu, Shubh Khanna, Cristobal Eyzaguirre, <u>**Manling Li**</u>, Juan Carlos Niebles, Vineeth Ravi, Saumitra Mishra,
Jiajun Wu
NeurIPS 2024

[P17] **LM-Steer: Word Embeddings Are Steers for Language Models**
Chi Han, Jialiang Xu, <u>**Manling Li**</u>, Yi Fung, Chenkai Sun, Nan Jiang, Tarek Abdelzaher, Heng Ji
ACL 2024 Outstanding Paper

[P16] **A Language First Approach to Procedure Planning**
Jiateng Liu, Sha Li, Zhenhailong Wang, <u>**Manling Li**</u>, Heng Ji
ACL 2023 Findings

[P15] **Multimedia Generative Script Learning for Planning**
Qingyun Wang, <u>**Manling Li**</u>, Hou Pong Chan, Lifu Huang, Julia Hockenmaier, Girish Chowdhary , Heng Ji
ACL 2023 Findings

[P14] **Non-Sequential Graph Script Induction via Multimedia Grounding**
Yu Zhou, Sha Li, <u>**Manling Li**</u>, Xudong Lin, Shih-Fu Chang, Mohit Bansal, Heng Ji
ACL 2023

[P13] **Learning to Decompose Visual Features with Latent Textual Prompts**
Feng Wang, <u>**Manling Li**</u>, Xudong Lin, Hairong Lv, Alexander Schwing, Heng Ji
ICLR 2023

[P12] **Towards Fast Adaptation of Pretrained Contrastive Models for Multi-channel Video-Language Retrieval**
Xudong Lin, Simran Tiwari, Shiyuan Huang, <u>**Manling Li**</u>, Mike Zheng Shou, Heng Ji, Shih-Fu Chang
CVPR 2023

[P11] **CLIP-Event: Connecting Vision and Text with Event Structures**
<u>**Manling Li**</u>, Ruochen Xu, Shuohang Wang, Xudong Lin, Chenguang Zhu, Michael Zeng, Heng Ji, Shih-Fu Chang
CVPR 2022 **Oral (4.14%)**

[P10] **Language Models with Image Descriptors are Strong Few-Shot Video-Language Learners**
Zhenhailong Wang*, <u>**Manling Li***</u>, Ruochen Xu, Luowei Zhou, Jie Lei, Xudong Lin, Shuohang Wang, Ziyi Yang, Chenguang Zhu,
Derek Hoiem, Shih-Fu Chang, Mohit Bansal, Heng Ji
NeurIPS 2022   (* denotes equal contribution)

[P9] **COVID-19 Claim Radar: A Structured Claim Extraction and Tracking System**
<u>**Manling Li**</u>, Revanth Gangi Reddy, Ziqi Wang, Yi-Shyuan Chiang, Tuan M. Lai, Pengfei Yu, Zixuan Zhang, Heng Ji
ACL Demo 2022

[P8] **Timeline Summarization based on Event Graph Compression via Time-Aware Optimal Transport**
<u>**Manling Li**</u>, Tengfei Ma, Mo Yu, Lingfei Wu, Tian Guo, Heng Ji, Kathleen McKeown
EMNLP 2021

[P7] **The Future is not One-dimensional: Complex Event Schema Induction via Graph Modeling**
<u>**Manling Li**</u>, Sha Li, Zhenhailong Wang, Lifu Huang, Kyunghyun Cho, Heng Ji, Jiawei Han
EMNLP 2021

[P6] **COVID-19 Literature Knowledge Graph Construction and Drug Repurposing Report Generation**
Qingyun Wang, <u>**Manling Li**</u>, Xuan Wang, Nikolaus Parulian, Guangxing Han, Jiawei Ma, Jingxuan Tu, Ying Lin, Haoran Zhang,
Weili Liu, Aabhas Chauhan, Yingjun Guan, Bangzheng Li, Ruisong Li, Xiangchen Song, Heng Ji, Jiawei Han, Shih-Fu Chang,
James Pustejovsky, David Liem, Ahmed Elsayed, Martha Palmer, Jasmine Rah, Clare Voss, Cynthia Schneider, Boyan Onyshkevych
NAACL 2021 Best Demo Paper

[P5] **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
EMNLP 2020

[P4] **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
ACL 2020 Best Demo Paper, Ranked 1st in NIST SM-KBP 2019

[P3] **Cross-media Structured Common Space for Multimedia Event Extraction**
Manling Li*, Alireza Zareian*, Qi Zeng, Spencer Whitehead, Di Lu, Heng Ji, Shih-Fu Chang
ACL 2020 (Oral)

[P2] **Multilingual Entity, Relation, Event and Human Value Extraction**
Manling Li, Ying Lin, Joe Hoover, Spencer Whitehead, Clare R Voss, Morteza Dehghani, Heng Ji
NAACL 2019 Demo Army Research Lab NS-CTA 10-year Milestone Demo Day

[P1] **Keep Meeting Summaries on Topic: Abstractive Multi-Modal Meeting Summarization**
Manling Li, Lingyu Zhang, Heng Ji, Rich Radke
ACL 2019

Tutorials and Invited Talks

Tutorials

[T11] **AAAI 2025 Tutorial and NAACL 2025 Tutorial**: Foundation Models for Embodied Agents
Manling Li, Yunzhu Li, Jiayuan Mao, Wenlong Huang.

[T10] **AAAI 2025 Tutorial**: The lifecycle of Knowledge in Foundation Models: Memorization, Editing, and Beyond
Sha Li, Manling Li, Yuji Zhang, Chi Han, Heng Ji.

[T9] **IJCAI 2024 Tutorial**: Beyond Human Creativity: A Tutorial on Advancements in AI Generated Content (AIGC)
Bang Liu, Yu Chen, Manling Li, Heng Ji, Lingfei Wu.

[T8] **AAAI 2023 Tutorial and CVPR 2023 Tutorial**: Knowledge-Driven Vision-Language Pretraining
Manling Li, Xudong Lin, Jie Lei, Mohit Bansal, Heng Ji, Carl Vondrick, Shih-Fu Chang

[T7] **NAACL 2022 Tutorial**: New Frontiers of Information Extraction
Muhao Chen, Lifu Huang, Manling Li, Ben Zhou, Heng Ji and Dan Roth

[T6] **AAAI 2021 Tutorial and ACL 2021 Tutorial**: Event-centric Natural Language Processing
Muhao Chen, Hongming Zhang, Qiang Ning, Manling Li, Heng Ji, Kathleen McKeown, Dan Roth

Selected Talk and Keynotes

[T5] **LLM Agent Training under a MDP Formulation**
AAAI New Faculty Highlights. Feb 2025.

[T4] **From Large Language Models to Large Agent Models**
Amazon-Illinois Center on AI for Interactive Conversational Experiences Fall Research Symposium. Sept 2024.

[T3] **Reasoning and Planning with Physical World Knowledge**
The 60th Allerton Conference on Communication, Control, and Computing. Sept 2024.

[T2] **Embodied Agent Interface: LLMs for Embodied Decision Making**
Multimodal AI Workshop 2024. Aug 2024.

[T1] **LLMs for Robotics: Modeling the Knowledge of the Physical World**
Stanford Vision and Learning Seminar. Oct 2023.

Professional Services

Organizing Committee
• ACL 2025 Virtual Infrastructure Chair
• NAACL 2025 Publication Chair
• EMNLP 2024 Demo Track Chair

Journal Guest Editor
• Entropy (Special Issue on Natural Langauge Processing and Data Mining)

Senior Area Chair
- EMNLP (2025-)

Area Chair
- ACL (2023-)
- EMNLP (2023-)
- NAACL (2024-)

Senior Program Committee Member
- IJCAI (2021)

Program Committee Member
- ACL Rolling Review (2021-)
- ACL (2021-), EMNLP (2021-), NAACL (2021-), COLING (2020-), EACL (2021-), NLPCC (2021-), AACL (2020-), CCL (2020-)
- AAAI (2021-), WWW (2021-), AKBC (2021-), KDD DI Workshop (2021-)

Workshop Organizer
- Foundation Models Meet Embodied Agents at CVPR 2025
- Language + Molecule Workshop at ACL 2024
- Towards Knowledgeable Language Models Workshop at ACL 2024, AAAI 2025, ACL 2025
- Bridge Program on Reasoning and Planning in Foundation Models at AAAI 2025
- Knowledge Discovery from Unstructured Data in Financial Services (KDF) Workshop at SIGIR (2023)

Teaching Experiences

Instructor
- CS 396 Reasoning and Planning in the Foundation Model Era. NU, Winter 2025
- CS 496 Agent AI. NU, Spring 2025

Open-Source Systems

- **RAGEN (RL-Agent)** (last author) [Code]
  A open-source RL training framework for LLM agents.

- **CoE (Mixture of Experts -> Chain of Experts)** (last author) [Code]
  A open-source RL training framework for LLM agents.

- **COVID-19 Claim Radar** (lead author) [Code]
  A structured claim extraction system, as well as refuting/supporting claim discovery.

- **GAIA: A Fine-grained Multimedia Knowledge Extraction System** (lead author) [Code]
  Entity, relaton, event extraction with coreference for multilingual (English, Spanish, and Russian) multimedia corpus.

- **Cross-lingual Entity Discovery and Linking** (lead author) [Code]
  Entity extraction and coreference for English, Spanish, and Chinese.

- **Multilingual Entity, Relation, Event and Human Value Extraction** (lead author) [Code]
  Knowledge extraction system with human values for English, Russian, and Ukrainian.

- **RESIN: Schema-Guided Cross-document Cross-lingual Cross-media Event Extraction and Tracking** [Code]
  Schema-Guided cross-document information extraction and tracking system.

Selected Media Coverage

- **RAGEN: AI framework tackles LLM agent instability**
  AI News

- **RAGEN & StarPO Aim to Tame LLM Instability in Complex Tasks**
  Business Leaders Review

- **Meet RAGEN Framework: The First Open-Source Reproduction of DeepSeek-R1 for Training Agentic Models via Reinforcement Learning**
  MARKTECHPOST

- **Manling Li Produces Award-Winning Event Schema Research with Adviser and Mentor Heng Ji**
  CS @ Illinois News
- **Manling Li Selected as EECS Rising Stars 2022**
  CS @ Illinois News