Xisen Jin

CONTACT Information Department of Computer Science University of Southern California, Los Angeles, US

RESEARCH INTERESTS

Natural Language Processing, Machine Learning

• Thesis Proposal: Continually Updatable Language Model Systems in the Wild

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EDUCATION

University of Southern California, Los Angeles, US

- Ph.D. student in Computer Science, From Aug. 2019 May. 2025 (expected)
- Advisor: Prof. Xiang Ren

Fudan University, Shanghai, China

- B.S. in Computer Science, From Sep. 2015 to Jul. 2019
- GPA: 3.75 / 4.00, Ranking: 1 / 117

National University of Singapore, Singapore

- Non-graduating Exchange Student, From Aug. 2017 to Dec. 2017
- GPA: 5.00 / 5.00

Preprints

- 1. **Xisen Jin**, Xiang Ren. Demystifying Language Model Forgetting with Low-rank Example Associations. *On Arxiv, June 2024*
 - Short version accepted as Oral in NeurIPS 2024 Workshop on Scalable Continual Learning for Lifelong Foundation Models

Publications

- 1. **Xisen Jin**, Xiang Ren. What Will My Model Forget? Forecasting Forgotten Examples in Language Model Refinement. *ICML 2024 Spotlight*
- 2. **Xisen Jin**, Xiang Ren, Daniel Preotiuc-Pietro, Pengxiang Cheng. Dataless Knowledge Fusion by Merging Weights of Language Models. *ICLR 2023*.
- 3. Genta Indra Winata, Lingjue Xie, Karthik Radhakrishnan, Shijie Wu, **Xisen Jin**, Pengxiang Cheng, Mayank Kulkarni, Daniel Preotiuc-Pietro. Overcoming Catastrophic Forgetting in Massively Multilingual Continual Learning. *Findings of ACL 2023* (short).
- 4. **Xisen Jin**, Dejiao Zhang, Henghui Zhu, Wei Xiao, Shang-Wen Li, Xiaokai Wei, Andrew Arnold, Xiang Ren. Lifelong Pretraining: Continually Adapting Language Models to Emerging Corpora. *NAACL 2022*, Long paper.
- 5. **Xisen Jin**, Arka Sadhu, Junyi Du, and Xiang Ren. Gradient-based Editing of Memory Examples for Online Task-free Continual Learning. *NeurIPS 2021*.
- 6. Huihan Yao, Ying Chen, Qinyuan Ye, **Xisen Jin**, Xiang Ren. Refining Language Models with Compositional Explanations. *NeurIPS 2021*.
- Xisen Jin, Bill Yuchen Lin, Mohammad Rostami, Xiang Ren. Learn Continually, Generalize Rapidly: Lifelong Knowledge Accumulation for Few-shot Learning. Findings of EMNLP 2021, Long paper.
- 8. **Xisen Jin**, Francesco Barbieri, Brendan Kennedy, Aida Mostafazadeh Davani, Leonardo Neves, Xiang Ren. On Transferability of Bias Mitigation Effects in Language Model Fine-Tuning. *NAACL 2021*, Long paper.
- 9. **Xisen Jin**, Junyi Du, Arka Sadhu, Ram Nevatia and Xiang Ren. Visually Grounded Continual Learning of Compositional Phrases. *EMNLP 2020*, Long paper.

- Woojeong Jin, Meng Qu, Xisen Jin, Xiang Ren. Recurrent event network: Autoregressive structure inference over temporal knowledge graphs. EMNLP 2020, Long paper.
- 11. Brendan Kennedy*, **Xisen Jin***, Aida Mostafazadeh Davani, Morteza Dehghani, and Xiang Ren. Contextualizing hate speech classifiers with post-hoc explanation. *ACL 2020*, Short paper. *Equal contribution.
- 12. **Xisen Jin**, Junyi Du, Zhongyu Wei, Xiangyang Xue and Xiang Ren. Towards Hierarchical Importance Attribution: Explaining Compositional Semantics for Neural Sequence Models, *ICLR* 2020, Spotlight.
- 13. **Xisen Jin**, Wenqiang Lei, Zhaochun Ren, Hongshen Chen, Shangsong Liang, Yihong Zhao and Dawei Yin. Explicit State Tracking with Semi-supervision for Neural Dialogue Generation, *CIKM 2018*, Full paper.
- 14. Wenqiang Lei, Xisen Jin, Zhaochun Ren, Xiangnan He, Min-Yen Kan and Dawei Yin. Sequicity: Simplifying Task-oriented Dialogue Systems with Single Sequence-to-Sequence Architectures. ACL 2018, Long paper.

Internships

Rufus team, Amazon Inc., San Francisco, USA

Research Intern, From May. 2024 to Aug. 2024

• Mentor: Zhenwei Dai, Zheng Li

NLP Platform team, Bloomberg L.P., New York, USA

Research Intern, From June. 2022 to Aug. 2022

Part-time Research Intern, From Aug. 2022 to Dec. 2022

• Mentor: Pengxiang Cheng, Daniel Preotiuc-Pietro

AWS team, Amazon Inc., USA

Research Intern, From May. 2021 to Aug. 2021

• Mentor: Dejiao Zhang, Henry Zhu, Wei Xiao, Andrew Arnold

Snap Inc., Los Angeles, USA

Research Intern, From May. 2020 to Aug. 2020

• Mentor: Francesco Barbieri, Leonardo Neves

Microsoft Research Asia, Beijing, China

Research Intern, Natural Language Computing group, From Jul. 2018 to Oct. 2018

• Mentor: Nan Duan, Ming Zhou

Data Science Lab, JD.com, Beijing, China

Research Intern, From Dec. 2017 to Feb. 2018

• Mentor: Zhaochun Ren, Dawei Yin

SCHOLARSHIPS AND AWARDS

- Apple Scholars in AI/ML, 2023
- Bloomberg Data Science Fellowship, 2022
- Annenberg Fellowship, University of Southern California, 2019
- National Scholarship of China, 2016 & 2017

Professional Services

 Program Committee of ICML 2024, ACL Rolling Review 2023-2024, ICLR 2024, ICML 2023, NeurIPS 2022

Teaching

• Teaching Assistant of DSCI 552: Machine Learning for Data Science, Fall 2022