Xisen Jin

CONTACT INFORMATION

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

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RESEARCH INTERESTS

Natural Language Processing

- Multimodal Learning, Dialogue Systems

Machine Learning

- Interpretability, Continual Learning, Semi-supervised learning,

EDUCATION

University of Southern California, Los Angeles, US
- Ph.D. student in Computer Science, From Aug. 2019
- Advisor: Dr. Xiang Ren

Fudan University, Shanghai, China
- B.S. in Computer Science (*Honored program*), 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

PUBLICATIONS

1. **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.

2. **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.

3. 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*. Full paper.

RESEARCH EXPERIENCE

Intelligence and Knowledge Discovery (INK) Research Lab, Los Angeles, US

PhD Student, From Aug. 2019 to Present

- Advisor: Dr. Xiang Ren
- Research on continual learning of visually grounded language to mimic children's language acquisition process. *Funded by DARPA*.
- Research on hierarchical explanation algorithms of neural network predictions.
- Research on improving and debiasing models by regularizing explanations.

Microsoft Research Asia, Beijing, China

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

- Advisor: Dr. Nan Duan, Dr. Ming Zhou
- Research on retrieval-enhanced dialogue generation models.

Data Science Lab, **JD.com**, Beijing, China

Research Intern, From Dec. 2017 to Feb. 2018

- Advisor: Dr. Zhaochun Ren, Dr. Dawei Yin

- Research on semi-supervised and unsupervised state tracking for dialogue systems.
- Experimented with real JD.com customer service corpus and several crowd-sourced corpora. The model generates interpretable dialogue states without supervision and outperforms fully-supervised baselines with only 50% of annotation.

Web Information Retrieval / Natural Language Processing Group (WING), National University of Singapore

Research Assistant, From Aug. 2017 to Dec. 2017

- Advisor: Dr. Min-Yen Kan
- Researched on task-oriented dialogue systems.
- The model significantly reduces model complexity by an order of magnitude, while outperforms state-of-the-art methods and retains satisfactory performance on out-of-vocabulary cases where competitors totally fail.

Natural Language Processing Group, School of Data Science, Fudan University

Research Assistant, From Oct. 2016 to Jul. 2019

- Advisor: Dr. Zhongyu Wei
- Research on hierarchical explanation algorithms of neural network predictions.
- Researched on text-based neural generative and discriminative speaker classifiers. Completed a funded undergraduate research project.

Selected Scholarships and Awards

- Honored Student of Computer Science Elite Program, 2019
- SIGIR Student Travel Grant, 2018
- Chinese National Scholarship, 2017
- First Prize, Fudan Scholarship for computer science elite program, 2017
- First Runner Up, IShamrock Software Competition, 2017
- 16/1000 in Microsoft Beauty of Programming Contest: *Document and KB based question answering*, 2017
- Chinese National Scholarship, 2016

Academic Activities

- Attended CIKM'18 conference and gave an oral presentation on the paper *Explicit State Tracking with Semi-supervision for Neural Dialogue Generation*. Oct 2018, Turin, Italy.

Selected Undergrad Projects

- Speech Recognition with deep learning and acoustic features
- Genome Assembly with de-bruijn graph and overlap-layout-consensus algorithm
- Optimal CDN Deployment with network flow algorithm and Genetic Algorithm (GA) optimization in C++
- Online Crowd-source Platform on MySQL and Python
- Driving Time Estimation upon GPS logs and road-maps with R-Tree, A-star and K-nearest-neighbour algorithm in C++
- Basic CPU and Shell simulator with GUI in C++