

Zhen Wang

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RESEARCH INTERESTS

My research lies in natural language processing, machine learning, and data mining. I'm interested in building up reliable AI powered by data-driven knowledge representation and advanced machine learning algorithms, involving reasoning and interpretability. I discover new knowledge from unstructured data (text), structured data (graph) and model parameters (pre-trained language models). I also build natural language interfaces including dialogue and question answering systems with more transparency and generalizability. I'm recently working on reasoning models over graphs, commonsense representation learning, constrained text generation and prompt-based zero-/few-shot learning.

EDUCATION

The Ohio State University (OSU) Columbus, OH, USA
PhD candidate, Dept. of Computer Science & Engineering Aug. 2016–Present
Advisor: Prof. Huan Sun (Since 2017)

Université Nice Sophia Antipolis (UNS) Nice, France
Visiting Student, Polytech Nice Sophia Jan. 2015–July 2015
Individual Study Advisor: Prof. Lionel Fillatre, Prof. Michel Barlaud

China University of Petroleum (UPC) Qingdao, China
B.S. in Electronic Information Engineering Sep. 2011–July 2015
Graduated as 1st-Ranked Student in Major Overall Ranking

WORK EXPERIENCE

The Ohio State University Columbus, OH, USA
Research Assistant, Dept. of Computer Science & Engineering 2018–Present
Advisor: Prof. Huan Sun

Microsoft Research Redmond Redmond, WA, USA
Research Intern, Language & Intelligent Assistance Summer 2021
Mentor: Dr. Nebojsa Jojic

NEC Labs America Princeton, NJ, USA
Research Intern, Data Science & System Security Summer 2020
Mentor: Dr. Bo Zong

The Ohio State University Columbus, OH, USA
Teaching Assistant, Dept. of Computer Science & Engineering Aug. 2017–Dec. 2017

PUBLICATIONS

- **Boosting Coherence of Language Models**
Nikolay Malkin, Zhen Wang, Nebojsa Jojic
arXiv.2110.08294 [[Paper](#)]
- **Knowledge Transfer between Heterogeneous Sources for Complex Question Answering**
Lingbo Mo, Zhen Wang, Jie Zhao, Huan Sun
In Submission.
- **Learning Interpretable Word Representations by Commonsense Knowledge Reasoning**
Zhen Wang, Bo Zong, Wei Cheng, Xuchao Zhang, Yanchi Liu, Wenchao Yu, Jingchao Ni, Haifeng Chen, Huan Sun
In Submission.

- **Modeling Context Pair Interaction for Pairwise Tasks on Graphs**
Zhen Wang, Bo Zong, Huan Sun
Proceedings of WSDM 2021 (Acceptance Rate: 18.6%, Long) [Paper]
- **Rationalizing Medical Relation Prediction from Corpus-level Statistics**
Zhen Wang, Jennifer Lee, Simon Lin, Huan Sun
Proceedings of ACL 2020 (Acceptance Rate: 22.7%, Long) [Paper]
- **SurfCon: Synonym Discovery on Privacy-Aware Clinical Data**
Zhen Wang, Xiang Yue, Soheil Moosavinasab, Yungui Huang, Simon Lin, Huan Sun
Proceeding of SIGKDD 2019 (Research Track, Acceptance Rate 14.2%, Oral) [Paper, Code]
- **Graph Embedding on Biomedical Networks: Methods, Applications, and Evaluations**
Xiang Yue, Zhen Wang, Jingong Huang, Srinivasan Parthasarathy, Soheil Moosavinasab, Yungui Huang, Simon M. Lin, Wen Zhang, Ping Zhang, Huan Sun
Bioinformatics, Volume 36, Issue 4, 15 February 2020, Pages 1241–1251 (Impact factor: 5.610) [Paper]
- **A Comprehensive Study of StaQC for Deep Code Summarization**
Jayavardhan Reddy Peddamail, Ziyu Yao, Zhen Wang, Huan Sun
Proceedings of SIGKDD 2018 (Deep Learning Day, SPOTLIGHT) [Paper]
- **Hessian Regularized Sparse Coding for Human Action Recognition**
Weifeng Liu, Zhen Wang, Dapeng Tao, Jun Yu
Proceedings of MMM 2015, Sydney, Australia [Paper]

HONORS AND AWARDS

- Graduate Student Research Poster Award (Top 5), CSE, OSU 2021
- SIGIR Student Travel Grant 2021
- **Rising Star in Data Science**, CDAC, University of Chicago 2020
- SIGKDD Student Travel Award 2019
- Excellent Bachelor Degree Thesis Award in Shandong Province, China 2016
- Excellent Graduate Thesis Award of UPC, China 2015
- **China Scholarship Council (CSC) Scholarship** 2015
 - A fully supported half-year visiting program in France
- **National Scholarship**, China 2014
- Soong Ching Ling Foundation (SCLF) Scholarship, China 2013
- National Scholarship for Encouragement, China 2012

SERVICE

- Program Committee: EMNLP 2021, ACL-IJCNLP 2021, NAACL-HLT 2021, NLPCC 2020
- External Reviewer: KDD (2019, 2020), ACL 2018, ICDM 2018

TEACHING EXPERIENCE

- **OSU, Department of Computer Science & Engineering**
 - *CSE 2111: Modeling and Problem Solving with Spreadsheets and Databases*
Teaching Assistant, Autumn, 2017
- **OSU, Department of Astronomy**
 - *Panel Discussion: 2001: A Space Odyssey - Science Fiction vs Science Fact*
Panelist, Feb. 2021

TALKS

- “SurfCon: Synonym Discovery on Privacy-Aware Clinical Data”, KDD 2019, August 6th, Anchorage, Alaska, USA
- “Rationalizing Relation Prediction from Corpus-level Statistics”, ACL 2020, July, Online
- “Modeling Context Pair Interaction for Pairwise Tasks on Graphs”, WSDM 2021, March, Online