# Renze Lou

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### **EDUCATION**

Pennsylvania State University, State College, USA

Fall 2022-Present

Ph.D., Computer Science and Engineering

### **RESEARCH FOCUS**

Natural Language Processing (NLP) | Large Language Models (LLMs) | Generative AI | AI4Science | Instruction Tuning & Following | Language Agent

**PUBLICATIONS** (Citations: 332 | h-index: 8)

# 2024:

- Renze Lou, Hanzi Xu, Sijia Wang, Jiangshu Du, Ryo Kamoi, Xiaoxin Lu, Jian Xie, Yuxuan Sun, Yusen Zhang, Jihyun Janice Ahn, Hongchao Fang, Zhuoyang Zou, Wenchao Ma, Xi Li, Kai Zhang, Congying Xia, Lifu Huang, Wenpeng Yin. AAAR-1.0: Assessing AI's Potential to Assist Research. *arXiv Preprint* 2024.
- Jiangshu Du, Yibo Wang, Wenting Zhao, Zhongfen Deng, Shuaiqi Liu, **Renze Lou**, and et al. <u>LLMs Assist NLP Researchers</u>: Critique Paper (Meta-)Reviewing. *EMNLP 2024*.
- Hanzi Xu, **Renze Lou**, Jiangshu Du, Vahid Mahzoon, Elmira Talebianaraki, Zhuoan Zhou, Elizabeth Garrison, Slobodan Vucetic, Wenpeng Yin. <u>LLMs</u>' Classification Performance is Overclaimed. *arXiv Preprint 2024*.
- Kexun Zhang, Weiran Yao, Zuxin Liu, Yihao Feng, Zhiwei Liu, Rithesh Murthy, Tian Lan, Lei Li, Renze Lou, Jiacheng Xu, Bo Pang, Yingbo Zhou, Shelby Heinecke, Silvio Savarese, Huan Wang, Caiming Xiong. Diversity Empowers Intelligence: Integrating Expertise of Software Engineering Agents. arXiv Preprint 2024.
- Xi Li, Yusen Zhang, **Renze Lou**, and et al. <u>Chain-of-Scrutiny: Detecting Backdoor Attacks for Large Language</u> Models. *arXiv Preprint* 2024.
- Ryo Kamoi, Sarkar Snigdha Sarathi Das, Renze Lou, Jihyun Janice Ahn, Yilun Zhao, Xiaoxin Lu, Nan Zhang, Yusen Zhang, Ranran Haoran Zhang, Sujeeth Reddy Vummanthala, Salika Dave, Shaobo Qin, Arman Cohan, Wenpeng Yin, Rui Zhang. Evaluating LLMs at Detecting Errors in LLM Responses. COLM 2024.
- Jian Xie\*, Kai Zhang\*, Jiangjie Chen, Tinghui Zhu, **Renze Lou**, Yuandong Tian, Yanghua Xiao, Yu Su. TravelBench: Toward Real-world Planning for Language Agents. *ICML* 2024. (Spotlight, 3.5%)

## 2023:

- **Renze Lou**, Kai Zhang, Jian Xie, Yuxuan Sun, Janice Ahn, Hanzi Xu, Yu Su, Wenpeng Yin. <u>MUFFIN:</u> Curating Multi-Faceted Instructions for Improving Instruction-Following. *ICLR* 2024.
- Jian Xie\*, Kai Zhang\*, Jiangjie Chen, **Renze Lou**, Yu Su. <u>Adaptive Chameleon or Stubborn Sloth: Unraveling the Behavior of Large Language Models in Knowledge Conflicts. *ICLR 2024*. (Spotlight, 5%)</u>
- Lin Sun\*, Kai Zhang\*, Qingyuan Li\*, **Renze Lou**. <u>UMIE: Unified Multimodal Information Extraction with Instruction Tuning</u>. *AAAI 2024*. (Oral)
- **Renze Lou**, Kai Zhang, Wenpeng Yin. <u>Large Language Model Instruction Following: A Survey of Progresses and Challenges. *Computational Linguistics* 2024.</u>
- Renze Lou and Wenpeng Yin. Toward Zero-Shot Instruction Following. SRW@EACL 2024.
- Janice Ahn, RISHU VERMA, **Renze Lou**, Di Liu, Rui Zhang, Wenpeng Yin. <u>Large Language Models for Mathematical Reasoning</u>: Progresses and Challenges. *SRW@EACL 2024*.

# 2022:

- Xiaojie Gu, **Renze Lou**, Lin Sun, Shangxin Li. <u>PAGE: A Position-Aware Graph-Based Model for Emotion</u> Cause Entailment in Conversation. *ICASSP 2023*.
- Yuanhe Tian, **Renze Lou**, Xiangyu Pang, Lianxi Wang, Shengyi JIANG and Yan Song. <u>Improving English-Arabic Transliteration with Phonemic Memories</u>. *EMNLP-Findings* 2022.

# 2021:

- Weicheng Ma, **Renze Lou**, Kai Zhang, Lili Wang and Soroush Vosoughi. <u>GradTS: A Gradient-Based Automatic</u> Auxiliary Task Selection Method Based on Transformer Networks. *EMNLP 2021*.
- Weicheng Ma\*, Kai Zhang\*, **Renze Lou**, Lili Wang and Soroush Vosoughi. <u>Contributions of Transformer Attention Heads in Multi- and Cross-lingual Tasks. *ACL 2021*. (Oral)</u>
- **Renze Lou\***, Yutong Wang\*, Kai Zhang\*, Maoyan Chen and Yujiu Yang. MORE: A Metric Learning Based Framework for Open-Domain Relation Extraction. *ICASSP 2021*.
- **Renze Lou\***, Fan Zhang\*, Xiaowei Zhou, Yutong Wang, Minghui Wu, Lin Sun. <u>A Unified Representation</u> Learning Strategy for Open Relation Extraction with Ranked List Loss. *CCL 2021*.

## WORK EXPERIENCE

#### AI Research Intern @ SalesForce

Palo Alto, CA

05/20/2024- 08/16/2024

· Large language models, Agents, and Code Generation.

## RESEARCH EXPERIENCE

Research Assistant. College of Engineering.	Penn State University & Temple University
Advisor: Wenpeng Yin	Sept. 2022-Present
Research Assistant. School of Data Science.	The Chinese University of HongKong (Shenzhen)
Advisor: Yan Song	Oct 2021-Jun 2022
Remote Research Intern. Minds, Machines and Society Group.	Dartmouth College
Advisor: Soroush Vosoughi	Oct 2020-Aug 2021
Remote Research Intern. Intelligent Computing Laboratory.	Tsinghua University
Advisor: Yujiu Yang	Jun 2020-Oct 2020
Research Assistant. Institute of Artificial Intelligence.	Zhejiang University City College (ZUCC)
Advisors: Lin Sun and Minghui Wu	May 2020-Mar 2021

### **AWARDS**

Outstanding Technical Contribution Grant for OpenVINO (awarded by Intel)	
Outstanding Graduates of Zhejiang Province (3%, awarded by Zhejiang Provincial Government)	
Zhejiang Provincial Government Scholarship (3%, awarded by Zhejiang Provincial Government)	
First Class Scholarship for Excellence in Scientific Research (5%, awarded by ZUCC)	
First Class Scholarship for Excellence in Competition Performance (5%, awarded by ZUCC)	
Second Class Scholarship for Academic Performance and Innovation (5%, awarded by ZUCC)	2020,2021
First Class Scholarship for Academic Performance and Innovation (1%, awarded by ZUCC)	

## **SERVICES**

Tutorial & Workshop Organizer: SciCap Challenge @ IJCAI 2024; Instruction Following Tutorial (under review).

**Reviewer**: ICLR(since 2024); ACL Rolling Review (since 2022); Instruction Workshop @ NeurIPS 2023; UDM @ KDD 2023; ToM @ ICML 2023; StarSEM (since 2023); AKBC 2022; NLPCC 2023; CCL 2023; IJCAI 2021; JISF.