

Qinyuan Ye

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Research Interests

Artificial Intelligence, Natural Language Processing, Large Language Models

- **Task-level Generalization:** Instruction tuning, meta-learning, lifelong learning;
- **Data-efficient Learning:** Few-shot learning, in-context learning, synthetic data generation;
- **Heterogeneous Supervision:** Learning from rules, explanations, instructions and feedback;
- **LLM Applied Research:** Automatic prompt engineering, long-context LM evaluation, inference efficiency.

Education

University of Southern California

Ph.D. Student in Computer Science

- Advisor: Prof. Xiang Ren
- Thesis: Cross-task Generalization Abilities of Large Language Models

Los Angeles, CA, U.S.

8/2019–5/2025(expected)

Tsinghua University

B.Eng. in Automation

Beijing, China

8/2015–7/2019

Publications

Stress-Testing Long-Context Language Models with Lifelong ICL and Task Haystack [Paper]

Xiaoyue Xu*, **Qinyuan Ye***, Xiang Ren

NeurIPS 2024 (Datasets and Benchmarks Track)

Prompt Engineering a Prompt Engineer [Paper]

Qinyuan Ye, Maxamed Axmed, Reid Pryzant, Fereshte Khani

ACL 2024 (Findings)

Cross-Task Generalization Abilities of Large Language Models [Paper]

Qinyuan Ye

NAACL 2024, Student Research Workshop (Thesis Proposal Track)

🏆 **Honorable Mention**

How Predictable Are Large Language Model Capabilities? A Case Study on BIG-bench [Paper]

Qinyuan Ye, Harvey Yiyun Fu, Xiang Ren, Robin Jia

EMNLP 2023 (Findings)

Estimating Large Language Model Capabilities without Labeled Test Data [Paper]

Harvey Yiyun Fu, **Qinyuan Ye**, Albert Xu, Xiang Ren, Robin Jia

EMNLP 2023 (Findings)

FiD-ICL: A Fusion-in-Decoder Approach for Efficient In-Context Learning [Paper]

Qinyuan Ye, Iz Beltagy, Matthew E. Peters, Xiang Ren, Hannaneh Hajishirzi

ACL 2023

Eliciting and Understanding Cross-task Skills with Task-Level Mixture-of-Experts [Paper]

Qinyuan Ye, Juan Zha, Xiang Ren

EMNLP 2022 (Findings)

Sparse Distillation: Speeding Up Text Classification by Using Bigger Student Models [Paper]

Qinyuan Ye, Madian Khabsa, Mike Lewis, Sinong Wang, Xiang Ren, Aaron Jaech
NAACL 2022 (Oral Presentation)

Refining Language Models with Compositional Explanations [Paper]

Huihan Yao, Ying Chen, Qinyuan Ye, Xisen Jin, Xiang Ren
NeurIPS 2021 (Spotlight Presentation)

CrossFit: A Few-shot Learning Challenge for Cross-task Generalization in NLP [Paper]

Qinyuan Ye, Bill Yuchen Lin, Xiang Ren
EMNLP 2021

On the Influence of Masking Policies in Intermediate Pre-training [Paper]

Qinyuan Ye, Belinda Z. Li, Sinong Wang, Benjamin Bolte, Hao Ma, Wen-tau Yih, Xiang Ren, Madian Khabsa
EMNLP 2021

Learning to Generate Task-specific Adapters from Task Description [Paper]

Qinyuan Ye, Xiang Ren
ACL-IJCNLP 2021 (Short Paper)

Semi-Automated Protocol Disambiguation and Code Generation [Paper]

Jane Yen, Tamás Lévai, Qinyuan Ye, Xiang Ren, Ramesh Govindan, Barath Raghavan
ACM SIGCOMM 2021

Teaching Machine Comprehension with Compositional Explanations [Paper]

Qinyuan Ye, Xiao Huang, Elizabeth Boschee, Xiang Ren
EMNLP 2020 (Findings)

LEAN-LIFE: A Label-Efficient Annotation Framework Towards Learning from Explanation [Paper]

Dong-Ho Lee*, Rahul Khanna*, Bill Yuchen Lin, Jamin Chen, Seyeon Lee, Qinyuan Ye, Elizabeth Boschee, Leonardo Neves and Xiang Ren
ACL 2020 (Demo Track)

Learning from Explanations with Neural Module Execution Tree [Paper]

Ziqi Wang*, Yujia Qin*, Wenxuan Zhou, Jun Yan, Qinyuan Ye, Leonardo Neves, Zhiyuan Liu, Xiang Ren
ICLR 2020

Looking Beyond Label Noise: Shifted Label Distribution Matters in Distantly Supervised Relation Extraction [Paper]

Qinyuan Ye*, Liyuan Liu*, Maosen Zhang, Xiang Ren
EMNLP-IJCNLP 2019 (Oral Presentation)

Internships

Research Intern

Office of Applied Research, Microsoft
o Mentors: Fereshte Khani, Maxamed Axmed

Redmond, WA, U.S.

5/2023–8/2023

Research Intern

AllenNLP, Allen Institute for AI
o Mentors: Iz Beltagy, Matthew E. Peters, Hannaneh Hajishirzi

Seattle, WA, U.S.

5/2022–8/2022

Research Intern

AI Integrity, Facebook AI

- Manager: Aaron Jaech; Collaborators: Madian Khabsa, Sinong Wang, Mike Lewis

Seattle, WA, U.S.

5/2021–8/2021

Research Intern

AI Integrity, Facebook AI

- Manager: Madian Khabsa; Collaborators: Belinda Z. Li, Sinong Wang, Scott Wen-tau Yih

Seattle, WA, U.S.

5/2020–8/2020

Software Engineering Intern in Machine Learning

TensorFlow Lite, Google

- Managers: Tian Lin, Xunkai Zhang; Team Lead: Shuangfeng Li

Beijing, China

3/2019–7/2019

Talks

Cross-task Generalization Abilities of Large Language Models

Talk at USC WiSE STEM Bytes Seminar

7/2024

Learning from Observations of Large Language Model Capabilities

Talk at Fudan NLP Group

11/2023

Acquiring and Understanding Cross-task Generalization with Diverse NLP Tasks

Talk at USC ISI Natural Language Seminar

10/2022

Acquiring Cross-task Generalization from Diverse NLP Tasks

Talk at NEC Labs Europe

2/2022

Teaching

Conference Tutorial

- LLM-driven Instruction Following: Progresses and Concerns, EMNLP 2023

Teaching Assistant

- CSCI 699 Data-Centric NLP (Fall 2022), Instructor: Prof. Swabha Swayamdipta
- CSCI 467 Introduction to Machine Learning (Spring 2023), Instructor: Prof. Robin Jia
- CSCI 360 Introduction to Artificial Intelligence (Spring 2025), Instructor: Prof. Ruishan Liu

Guest Lecture on Prompting and Instruction Tuning

- CSCI 499 Language Models in NLP (Fall 2023, Spring 2024), Instructor: Prof. Swabha Swayamdipta
- CSCI 662 Advanced Natural Language Processing (Fall 2023), Instructor: Prof. Jonathan May

Service

Organizer

- General Co-chair, Workshop on Instruction Tuning and Instruction Following, NeurIPS 2023
- Local Organization Co-chair, SoCal NLP Symposium 2023

Reviewer

- EMNLP (2020-23), NAACL (2021), ACL (2021,2023), COLM (2024), ACL ARR (10/2021-)
- NeurIPS (2021-24), ICLR (2022-25), ICML (2023-24)
- PNAS (11/2024)

Action Editor

- ACL ARR (6/2024,10/2024)

Mentor

- USC Women in Science and Engineering Mentorship Program (2022-23)

Honors and Awards

EMNLP 2024 Outstanding Area Chair , EMNLP 2024	11/2024
NAACL 2024 Student Research Workshop Travel Grant , NAACL 2024	6/2024
OpenAI Researcher Access Program , \$10,000 API Credit	4/2024
Cohere For AI Research Grant Program , \$2,000 API Credit	4/2024
Finalist, Two Sigma Diversity PhD Fellowship , Two Sigma	3/2022
WiSE Qualcomm Top-Off Fellowship , University of Southern California	11/2021
Annenberg Fellowship , University of Southern California	2/2019
China National Scholarship , Ministry of Education, P.R. China	10/2017,10/2018
POSCO Asia Fellowship , POSCO TJ Park Foundation	10/2016
Bronze Medal, China National Olympiad in Informatics , China Computer Federation	7/2014

Skills

Programming: Proficient in Python and \LaTeX ; Capable of C, C++, Matlab

Toolkits and Libraries: PyTorch, transformers, vllm, transformer-lens, numpy, pandas, git

Updated on Feb 9, 2025.