

# Mr. Yuxiao Ye

yyx991226@163.com | +86 18519112663

**Research Interests:** Deep Learning; Deep Reinforcement Learning; Mobile Crowdsensing; LLM Agent



## EDUCATION

**Beijing Institute of Technology** (985 & 211 project university) 2022.09-Present  
*MSc in Computer Science and Technology* Supervisor: Prof. Chi (Harold) Liu, *FIET, FBCS* GPA: 3.6/4.0  
Core Courses: Language Information Processing, Artificial Intelligence, Statistical Pattern Recognition, Information Retrieval

**Beijing Institute of Technology** 2018.09-2022.06  
*BSc in Computer Science and Technology* Average Score: 88.6 GPA: 3.6/4.0 (rank: 7/56)  
Core Courses: Mathematical Analysis (93/100), Probability and Statistics (96/100), Algorithm Design and Analysis (95/100), Methods and Practice of Program Design (98/100), Data Structure (92/100), C Programming (94/100)



## PUBLICATIONS

- **[CCFA - ICDE]** Yuxiao Ye, Chi Harold Liu, Zipeng Dai, et al., “Exploring both Individuality and Cooperation for Air-Ground Spatial Crowdsourcing by Multi-Agent Deep Reinforcement Learning,” in *IEEE International Conference on Data Engineering*, Anaheim, California, USA, April 2023, pp: 205-217, 2023.
- **[CCFA - JSAC]** Yuxiao Ye\*, Hao Wang\*, Chi Harold Liu, et al., “QoI-Aware Mobile Crowdsensing for Metaverse by Multi-Agent Deep Reinforcement Learning,” in *IEEE Journal on Selected Areas in Communications*, vol. 42, no. 5, pp. 783-798, 2024.
- **[CCFA - INFOCOM]** Zipeng Dai, Chi Harold Liu, Yuxiao Ye, et al., “AoI-minimal UAV Crowdsensing by Model-based Graph Convolutional Reinforcement Learning,” in *IEEE INFOCOM 2022*, pp: 1029-1038, 2022.
- Bin Zhang\*, Yuxiao Ye\*, et al., “Benchmarking the Text-to-SQL Capability of Large Language Models: A Comprehensive Evaluation,” Arxiv Preprint.
- Zhishuai Li\*, Xiang Wang\*, Jingjing Zhao\*, Sun Yang\*, Guoqing Du\*, Xiaoru Hu\*, Bin Zhang\*, Yuxiao Ye\*, et al., “PET-SQL: A Prompt-enhanced Two-stage Text-to-SQL Framework with Cross-consistency,” Arxiv Preprint.



## HONORS and AWARD

**Grand Prize** in "China Collegiate Computing Contest - AI Innovation Contest" (awarded 4/3400+) 2022

**National Scholarship** 2023

Outstanding Graduate Student, Beijing Institute of Technology 2023

Outstanding Undergraduate Student, Beijing Institute of Technology 2022

First-Class Academic Scholarship, Beijing Institute of Technology 2022, 2023



## RESEARCH EXPERIENCES

**Research Assistant, Mobile Crowdsensing by Deep Reinforcement Learning** 2021.06-Present

- Proposed a multi-agent DRL framework for air-ground spatial crowdsourcing, which consists of an intrinsic reward driven exploitation of individuality and a heterogeneous coordinated policy optimization, enabling accurate spatial division of work and flexible cooperation preference modeling among UAVs and UGVs.
- Proposed a collaborative UAV control framework with a human mobility prediction mechanism, to achieve efficient coordination of UAVs and provide satisfactory quality-of-information experiences of mobile users.

**Intern, SenseTime Large Language Model Group** 2023.12-2024.04

- Proposed an LLM-based Text-to-SQL framework, consisting of an enhancement of in-context learning and schema linking, and a cross-consistency mechanism across different models, which achieves new SOTA results on the Spider benchmark with an accuracy of 87.6%.
- Constructed a new Text-to-SQL benchmark to mitigate overfitting in LLMs, conducted comprehensive evaluations on

five Text-to-SQL sub-tasks across six LLMs, identified the distinct capabilities and limitations of LLMs, and proposed optimal in-context learning solutions tailored to each sub-task.



## COMPUTER SKILLS

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Programming: Python, C/C++/C#, Java, Matlab, SQL; Software: Pytorch, Tensorflow, Hugging Face Transformers, DeepSpeed