

## Murong Yue

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## EDUCATION

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**George Mason University**, Fairfax, VA  
Ph.D. in Computer Science

2022 – now

**University of Southern California**, Los Angeles, CA  
M.S. in Electrical and Computing Engineering

2018 – 2020

**Beijing Jiaotong University**, Beijing, China  
B.E. in Electrical and Computing Engineering

2014 – 2018

## PUBLICATION

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**Murong Yue**, Zhiwei Liu, Liangwei Yang, Jianguo Zhang, Zuxin Liu, Haolin Chen, Ziyu Yao, Silvio Savarese, Caiming Xiong, Shelby Heinecke, Huan Wang, “ToolLibGen: Scalable Automatic Tool Creation and Aggregation for LLM Reasoning”, **Preprint**[paper]

**Murong Yue**, Ziyu Yao, “Efficient but Vulnerable: Benchmarking and Defending LLM Batch Prompting Attack”, **ACL Findings 2025**[paper]

**Murong Yue**, Wenlin Yao, Haitao Mi, Dian Yu, Ziyu Yao, Dong Yu, “DOTS: Learning to Reason Dynamically in LLMs via Optimal Reasoning Trajectories Search”, **ICLR 2025**[paper]

**Murong Yue**, Wijdane Mifdal, Yixuan Zhang, Jennifer Suh, Ziyu Yao, “MathVC: An LLM-Simulated Multi-Character Virtual Classroom for Mathematics Education”, **AAAI 2025 AI4EDU Workshop**[paper]

**Murong Yue**, Jie Zhao, Min Zhang, Liang Du, Ziyu Yao, “Large Language Model Cascades with Mixture of Thoughts Representations for Cost-efficient Reasoning”, **ICLR 2024**[paper]

Sai Adith Senthil Kumar, Hao Yan, Saipavan Perepa, **Murong Yue**, Ziyu Yao, “Can LLMs Simulate Personas with Reversed Performance? A Benchmark for Counterfactual Instruction Following”, **COLM 2025 workshop**[paper]

Min Zhang, Jiangeng He, Shuo Lei, **Murong Yue**, Linhan Wang, Chang-Tien Lu, “Can LLM find the green circle? Investigation and Human-guided tool manipulation for compositional generalization”, **ICASSP 2024**.[paper]

Binfeng Xu, Xukun Liu, Hua Shen, Zeyu Han, Yuhan Li, **Murong Yue**, Zhiyuan Peng, Yuchen Liu, Ziyu Yao, Dongkuan Xu, “Gentopia: A Collaborative Platform for Tool-Augmented LLMs”, **EMNLP Demo 2023**.[paper]

## EXPERIENCE

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### Salesforce Research

*Research Intern*

Palo Alto, CA

May. 2025 - Sep. 2025

- Lead a project for the LLM automatic agent tool creation to improve the reasoning performance in math and science.[paper]

### Tencent America, AI labs

*Research Intern*

Bellevue, WA

May. 2024 - Aug. 2024

- Responsible for enhancing the reasoning capability of large language models in the post-training process. Developed DOTS [paper] methods in making LLM learn to reason dynamically via optimal reasoning trajectories search.

### George Mason University

*Graduate Research Assistance*

Fairfax, VA

May. 2023 - present

- Explore the interactive LLM systems for simulating students [paper].

### Graduate Teaching Assistance

Aug. 2022 - May. 2023

- Teaching Assistant for CS110 and CS112.

### Alibaba

*Machine Learning Engineer*

Beijing, China

2021 - 2022

- Developed a cross-modal retrieval module using contrastive learning to align text and music representations.
- Responsible for the research of the spoken dialect classification with curriculum learning.

### Pingan Technology, AI Labs

*Research Intern*

Beijing, China

May. 2019- Aug. 2019

- Trained the TDNN neural network to extract the features of speakers and designed a speaker verification method based on the extracted speaker features. The error rate decreased from 13.7% to 8.4%.

## **PROFESSIONAL SERVICE**

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### **Organizing Committee**

MASC-SLL 2023 - 10th Mid-Atlantic Student Colloquium on Speech, Language and Learning

### **Reviewer**

NeurIPS, ICLR, ARR, ICML, COLM, CHI, ACM Trans of Computing Healthcare

## **INVITED TALKS**

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**LLM agent: build your own personal assistant**, Invited talk at George Mason University Event for Hand-on Generative AI. Feb, 2024

**Large Language Model Cascades with Mixture of Thoughts Representations for Cost-efficient Reasoning**, Invited talk at Microsoft Semantic Machines. Oct. 2023

## **HONOR AND AWARD**

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2024 Outstanding PhD Student Award

2024 Recognition for Service on Hands-On Generative AI Tutorial

2016 BJTU Scholarship