

# Maizhen Ning

Xi'an Jiaotong-Liverpool University, Ren'ai 111 Road, Suzhou, Jiangsu-215123, China

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## EDUCATION

### PhD Student in Computer Science

Dec 2020 - Present

University of Liverpool, UK

Based on off-site and joint supervision at Xi'an Jiaotong-Liverpool University

Supervisors: Prof. Qiufeng Wang, Prof. Kaizhu Huang, Prof. Xiaowei Huang

### Bachelor of Science in Computer Science (First Class)

Sep 2016 - May 2020

Cooperation between the University of Liverpool and Xi'an Jiaotong-Liverpool University

University of Liverpool, UK, Supervisor: Prof. Xiaowei Huang

Sep 2018 - May 2020

Xi'an Jiaotong-Liverpool University, China

Sep 2016 - May 2018

## RESEARCH INTERESTS

Plane Geometry Problem Solving, Math Word Problem Solving, Math Problem Generation, Large Language Model Reasoning, Natural Language Processing, Document Information Extraction

## RESEARCH PUBLICATION

\* Denotes Equal Contribution. See the full list in Google Scholar.

### *GNS: Solving Plane Geometry Problems by Neural-Symbolic Reasoning with Multi-Modal LLMs*

Maizhen Ning\*, Zihao Zhou\*, Qiufeng Wang, Xiaowei Huang, Kaizhu Huang

The 39th Annual AAAI Conference on Artificial Intelligence (AAAI)

Feb 2025

### *Is Your Model Really a Good Math Reasoner? Evaluating Mathematical Reasoning with Checklist*

Zihao Zhou\*, Shudong Liu\*, Maizhen Ning, Wei Liu, Jindong Wang, Derek F Wong, Xiaowei Huang, Qiufeng Wang, Kaizhu Huang

arxiv preprint

Oct 2024

### *A Symbolic Characters Aware Model for Solving Geometry Problems*

Maizhen Ning, Qiufeng Wang, Kaizhu Huang, Xiaowei Huang

The 31st ACM International Conference on Multimedia (ACM MM)

Oct 2023

### *Learning by Analogy: Diverse Questions Generation in Math Word Problem*

Zihao Zhou\*, Maizhen Ning\*, Qiufeng Wang, Jie Yao, Wei Wang, Xiaowei Huang, Kaizhu Huang

Findings of the Association for Computational Linguistics: ACL 2023 (ACL Findings)

Jul 2023

### *A Segment-Based Layout Aware Model for Information Extraction on Document Images*

Maizhen Ning, Qiufeng Wang, Kaizhu Huang, Xiaowei Huang

The 28th International Conference on Neural Information Processing (ICONIP)

Dec 2021

## EXPERIENCE

### Teaching Assistant

School of Advanced Technology, XJTLU

Mar 2021 - May 2024

### Technician Intern

Management Information Technology and System Office, XJTLU

Sep 2016 - Jul 2017

## HONORS AND AWARDS

Full Doctoral Scholarship, University of Liverpool and XJTLU

Dec 2020

RoboMaster 2022: First prize in the RoboMaster National Competition, XJTLU Team

Aug 2022

RoboMaster 2021: Second prize in the RoboMaster National Competition, XJTLU Team

Aug 2021

RoboMaster 2019: Third prize in the RoboMaster International Competition, UoL Team

Aug 2019