

Yingzi Ma

PhD Student at Information Science
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RESEARCH INTERESTS

I am a first-year PhD student majoring in Information Science at University of Wisconsin Madison, advised by Chaowei Xiao. I have been very fortunate to work with Prof. Colin TAN in 2022 during the SOC summer workshop at National University of Singapore. I started my internship in April 2022 with Prof. Lu Chen in the language model group of the XLANCE lab at Shanghai Jiao Tong University. Now, I am collaborating with Yulong Cao, an NVIDIA researcher at the NVIDIA Autonomous Vehicle Research group.

My research interests are:

- Multi-modal Large Language Models (MLLMs).
- End-to-end Autonomous Driving System.
- Parameter-efficient fine-tuning (PEFT) of large-scale Pre-trained Language Models (PLMs).

EDUCATION

University of Wisconsin Madison, Madison, U.S. Sept. 2024 | Jun. 2029 (expected)
PhD in Information Science

Sichuan University, Chengdu, China Sept. 2020 | Jun. 2024 (expected)
Bachelor of Engineering (BEng) in Artificial Intelligence Cumulative GPA: 3.84/4.00
China National Scholarship, 2021 Score Point Average: 91.26 (Rank, 3/39)

Sichuan University, Chengdu, China Sept. 2019 | Jun. 2020
Bachelor of Arts (BA) in Tourism Management Cumulative GPA: 3.86/4.00
China National Scholarship, 2020 Score Point Average: 90.67 (Rank, 1/102)

PUBLICATIONS

Conference paper

- **Dolphins: Multimodal Language Model for Driving** [[Autonomous Driving](#), [MLLM](#)]
Yingzi Ma, Yulong Cao, Jiachen Sun, Marco Pavone, Chaowei Xiao
Published on ECCV. 2024. [[WebPage](#)][[PDF](#)]
- **Benchmarking Vision Language Model Unlearning via Fictitious Facial Identity Dataset** [[MLLM](#)]
Yingzi Ma, Jiong Xiao Wang, Fei Wang, Siyuan Ma, Jiazhaoli, Xiujuan Li, Furong Huang, Lichao Sun, Bo Li, Yejin Choi, Muhao Chen, Chaowei Xiao
Arxiv. 2024.
- **MIXLORA: Enhancing Large Language Models Fine-Tuning with LoRA-based Mixture of Experts** [[PEFT](#)]
Dengchun Li, Yingzi Ma, Naizheng Wang, Zhengmao Ye, Zhiyuan Cheng, Yinghao Tang, Yan Zhang, Lei Duan, Jie Zuo, Cal Yang, Mingjie Tang
Arxiv. 2024. [[PDF](#)]
- **MULTI: Multimodal Understanding Leaderboard with Text and Images** [[MLLM](#)]
Zichen Zhu, Yang Xu, Lu Chen, Jingkai Yang, Yichuan Ma, Yiming Sun, Hailin Wen, Jiaqi Liu, Jinyu Cai, Yingzi Ma, Situo Zhang, Zihan Zhao, Liangtai Sun, Kai Yu
Arxiv. 2024. [[PDF](#)]
- **Understanding the Multimodal Instruction Format for In-Context Learning** [[MLLM](#)]
Yingzi Ma, Chunyuan Li, Chaowei Xiao
Preprint. 2023.
- **CAM-GUI: A Conversational Assistant on Mobile GUI** [[MLLM](#)]
Zichen Zhu, Liangtai Sun, Jingkai Yang, Yifan Peng, Wutao Li, Weilin Zou, Ziyuan Li, Lu Chen, Yingzi Ma, Danyang Zhang and Kai Yu
Published on *NCMMSC*. 2023. [[PDF](#)]

- **SK-Adapter: Syntax Enhanced Pre-trained Language Models with Structured Knowledge Adapter [PEFT]**
Yingzi Ma, Da Ma, Zichen Zhu, Yunyan Zhang, Ruihui Zhao, Huimin Wang, Yefeng Zheng and Lu Chen
Preprint. 2023

PROFESSIONAL SERVICES

- ICLR 2024 Reviewer
- ICLR 2025 Reviewer

ACADEMIC EXPERIENCE

University of Wisconsin, Madison (UWM)

Madison, WI 53706, United States

Research Intern

Apr. 2023 | Present

- Working with Prof. Chaowei Xiao at University of Wisconsin–Madison and Chunyuan Li, a principal researcher at Microsoft Research, Redmond, we Exploring the effects of different data formats on multimodal in-context learning.
- Collaborating with Prof. Chaowei Xiao and some researchers from NVIDIA, we aim to extend the powerful capabilities of MLLMs to autonomous driving-related videos.
- All tasks, including coding and conducting experiments, were carried out solely by me in these two research projects.

Shanghai Jiao Tong University (SJTU)

Shanghai, China

Research Intern

May. 2022 | Apr. 2023

- Work as a research intern advised by Prof. Lu Chen in the language model group of the Cross Media Language Intelligence Lab (X-LANCE Lab) at SJTU.
- Contribute to enhancing the performance of PLMs on NLU and NLG tasks by injecting syntax structure information through structured knowledge adapters (SK-Adapter).
- Collaborate with researchers from Tencent Jarvis Lab to apply PLMs on the Chinese medical corpus.

National University of Singapore (NUS)

Singapore

Summer Intern

Apr. 2022 | Aug. 2022

- Attend the embedding system and deep learning topic in the NUS SOC summer workshop and I am very fortunate to be advised by Prof. Colin TAN.
- Achieve A+ grade in all courses, which was evaluated based on assignments, quizzes, and projects.
- Win the **First Prize** in the topic Embedded System and Deep Learning with the final project Baby Care.

Sichuan University (SCU)

Chengdu, China

Team Member

Sept. 2021 | Sept. 2022

- Collaborate with four other members of a team to carry out a project of **CBCT jaw region segmentation method based on context fusion mechanism**.
- Attend the National College Students' Innovation and Entrepreneurship Training Program, 2022, and receive the provincial-level assessment.
- Publish a patent for an invention as the first inventor (**CN115578406A**).

SKILLS

- **Languages:** Mandarin, English, Japanese
- **Programming:** Python, C/C++, \LaTeX , MATLAB, Mathematica, Javascript
- **Machine Learning:** PyTorch, TensorFlow, Sklearn, PaddlePaddle, Stable_baselines3
- **Tools:** SQL, Shell, Git, Slurm
- **Other:** SPSS, Linux (openSUSE, Ubuntu), Mac OS, Windows OS

AWARDS

- **Finalist**, Mathematical Competition In Modeling (MCM), 2022
- **Honorable Mention**, Interdisciplinary Contest In Modeling (ICM), 2021
- **2nd Award**, Contemporary Undergraduate Mathematical Contest in Modeling (CUMCM), 2021
- **2nd Award**, Chinese Mathematics Competitions (CMC), 2020

MISCELLANEOUS

- I also love to play table tennis, Go (Weiqi), and clarinet.
- I really like anime because it shows an ideal world that could not exist in reality.