Xinyi Ling

220 Lincoln Tower, 1800 Cannon Drive, Columbus, OH 43210
(805) 717-5325 ⋄ xyling012@gmail.com

EDUCATION

The Ohio State University — Columbus, OH
Ph.D. student — *Aug. 2023 - current*
Department of Computer Science and Engineering

Wuhan University — Wuhan, China
Bachelor of Engineering — *Sep. 2019 - Jun. 2023*
School of Computer Science

RESEARCH INTERESTS

My research interest primarily focuses on large language models with their personalization and applications in the e-commerce domain, including finetuning, evaluation and benchmarking, multimodal learning, and conversational planning. I have been working on generalizing foundation models to e-commerce tasks (e.g., recommendations with user behavior modeling). I also worked on multimodal learning in leveraging product images to boost performance. Currently, I am working on multi-turn conversation planning with large language models.

WORK EXPERIENCE

- **The Ohio State University** — Columbus, OH
  Graduate Research Associate — *Aug. 2023 - Current*
  - Conducted research on large language models and personalization with applications in e-commerce with Dr. Ning.
  - Developed methods for benchmarking, multimodal learning, and conversational planning, improving model adaptability and dialogue quality.
- **Meituan** — Beijing, China
  Software Engineer Intern — *Jun. 2022 - Aug. 2022*
  - Engineered backend microservices (SpringBoot, MySQL) for automated execution of mapping algorithms, handling millions of daily map updates with reduced notification latency.
  - Optimized map-data quality analysis pipeline, applying advanced indexing and caching, resulting in a 200× speedup
  - Designed and deployed a real-time anomaly detection system for map data integrity, catching dozens of strategy errors per week before release.
  - Processed and validated 1M+ road mount-points daily, ensuring consistency across multiple versions of the Meituan map used by millions of users.
- **Zhizhu Tech** — Wuhan, China
  Machine Learning Intern — *Apr. 2021 - Oct. 2021*
  - Developed a deep learning pipeline (ResNet + YOLO) for furniture style matching, achieving 97% style recognition and 94% layout consistency, integrated into an internal design recommendation tool.
  - Reproduced and extended research in semantic segmentation and room type classification, contributing to an automatic furniture layout generation system for interior design applications and enabling automatic furniture arrangement suggestions for new floor plans.
  - Authored internal documentation and presented findings to both research and engineering teams, bridging academic research and commercial product development.

PUBLICATIONS

*: co-first author

1. **Xinyi Ling**, Hanwen Du, Zhihui Zhu, and Xia Ning. EcomMMMU: Strategic Utilization of Visuals for Robust Multimodal E-commerce Models. In *Proceedings of the 14th International Joint Conference on Natural Language Processing and the 3rd Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics (IJCNLP-AACL)*, 2025

2. **Xinyi Ling**, Hanwen Du, Bo Peng, Zhihui Zhu, and Xia Ning. Captions Speak Louder than Images: Generalizing Foundation Models for E-commerce from High-quality Multimodal Instruction Data. In *Proceedings of the 14th International Joint Conference on Natural Language Processing and the 3rd Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics (IJCNLP-AACL)*, 2025

3. Bo Peng*, **Xinyi Ling***, Ziru Chen, Huan Sun, and Xia Ning. eCeLLM: Generalizing large language models for e-commerce from large-scale, high-quality instruction data. In *Proceedings of the 41st International Conference on Machine Learning (ICML)*, pages 40215–40257, 2024

4. Yequan Bie, Lingjun Liao, **Ling, Xinyi**, Xiaolong Zhu, Xiaxue Ouyang, Junhui He, Yize Tong, and Teoh Teik Toe. Age estimation with synthetic mask generation based on mobilenet and facial keypoint detection. In *IEEE 4th International Conference on Power, Intelligent Computing and Systems (ICPICS)*, pages 84–89, 2022

RESEARCH EXPERIENCE

- Uncertainty-guided Conversational Planning, with Dr. Xia Ning, OSU *Jun. 2025 - current*
  - We formulated conversation as information acquisition to guide the LLMs reasoning in complex conversational decision-making tasks under uncertainty.
  - An uncertainty-aware, task-oriented, multi-turn conversational system is developed to interact with the user to identify their preferences.
- Cyberbullying Detection with Dr. Chao Liang, Wuhan University *Jan. 2023 - May 2023*
  - We developed a deep learning method utilizing the Bi-GRU and the hierarchical attention network to detect the occurrence of cyberbullying by capturing contextual dependencies in comments and assessing the importance of words in cyberbullying sessions.
  - Through testing on two datasets, the model demonstrated superior performance compared to baseline approaches, indicating its effectiveness in cyberbullying text detection.
- Point-of-Interest Recommender Systems, with Dr. Yan Luo, PolyU *Apr. 2022 - Jun. 2022*
  - Collected datasets with users and location information from Yelp and Gowalla. Completed the filtering and statistical work on datasets for the proposed method.
  - Implemented Transformers on Yelp datasets to analyze the data.

HONORS AND AWARDS

- Outstanding Graduate Award - Wuhan University *Jun. 2023*
- University Fellowship Award - Wuhan University *Sep. 2022, 2021, 2020*
- Merit Student Honors - Wuhan University *Oct 2022, 2021, 2020*
- Meritorious Winner of Mathematical Contest In Modeling *Apr. 2021*

SKILLS

Program Languages	Python, Java, SQL, Shell Script, Latex
ML Libraries	Pytorch, Transformers, Scikit-learn, Numpy, Pandas, Matplotlib
Miscellaneous Tools	Git, VSCode, Slurm, Jupyter, Linux, Huggingface
Languages	English, Chinese