Yizhi LI

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Yizhi Li is currently a PhD candidate at the University of Manchester, focusing on post-training of large language models (LLMs) and multimodal LLMs. Starting from 2019, his research journey has encompassed a wide range of artificial intelligence topics and derived multiple top-tier conference papers, including text, image and audio representation learning [16, 11, 9, 5], training and evaluation of foundation models [2, 6, 1], and research on multimodal large language models [3]. Yizhi also co-founded the M-A-P research community to promote open-source artificial intelligence research.

Education

Feb. 2022 - 2025 (Expected) | **University of Manchester**
PhD candidate funded by the Department of Computer Science, supervised by Prof. Chenghua Lin

Feb. 2021 - Jun. 2021 | **New York University**
MS (LOA), Computer Science

Sep. 2018 - Feb. 2019 | **Institut Supérieur d'Électronique de Paris**
Exchange Student, MS-level Embedded System Design

Work Experience

Jun. 2024 - Sep. 2024 | **Artificial Intelligence Research, J.P. Morgan**
Research Summer Associate
- Multimodal Alignment for Time Series and Language Models.

May 2020 - May 2021 | **Natural Language Processing Lab, Tsinghua University**
Research Assistant, Supervised by Zhiyuan Liu & Chenyan Xiong
- BERT-based Dense Retriever for MS MARCO [16].

Service and Award

Conference Reviewer *The European Chapter of the ACL (EACL); Empirical Methods in Natural Language Processing (EMNLP); The International Society for Music Information Retrieval (ISMIR); International Natural Language Generation Conference (INLG)*

Workshop Organizer Committee *Open Science for Foundation Models at ICLR 2025*

Journal Reviewer *Computer Speech & Language; Cognitive Computation and Systems*

Mar. 2023 | *Co-founder of **the Multimodal Art Projection (MAP) research community**, which aims at conducting open-source multi-modality researches targeting on text, audio, and vision. Our models achieved over 50K+ per month downloads. Over 70 students and senior researchers have participated the community and collaborate on a wide range of researches beneficial to the audience both from academia and industry.*

Jun. 2023 | *Received the **Best Student Pitch** at MultimodalAI'23 workshop First Workshop on Multimodal AI. This workshop is jointly organised by University of Sheffield and University of Oxford under the Turing Network Funding from the Alan Turing Institute, with support from University of Sheffield's Centre for Machine Intelligence and Alan Turing Institute's Interest Group on Meta-learning for Multimodal Data.*

Others

Open-source Projects | Open Source O1, OmniBench, MERT, MARBLE Benchmark, and more

Programming | Python, Bash Script, PyTorch, Tensorflow(2.0+), C/C++

Fun Facts | I am proficient in three dialects of Chinese; also a PADI Advanced Open Water (AOW) scuba diver.

Selected Publications

2024

1. **Li, Y.** *et al.* CIF-Bench: A Chinese Instruction-Following Benchmark for Evaluating the Generalizability of Large Language Models. *Findings of Association for Computational Linguistics*. https://aclanthology.org/2024.findings-acl.739/ (2024).
2. **Li, Y.** *et al.* MERT: Acoustic Music Understanding Model with Large-Scale Self-supervised Training. *International Conference on Learning Representations*. https://openreview.net/forum?id=w3YZ9MSlBu (2024).
3. **Li, Y.** *et al.* OmniBench: Towards The Future of Universal Omni-Language Models. *ArXiv* **abs/2409.15272.** https://arxiv.org/abs/2409.15272 (2024).
4. Ma, Y. *et al.* Foundation models for music: A survey. *ArXiv* **abs/2408.14340.** https://arxiv.org/abs/2408.14340 (2024).
5. Wu, S. *et al.* SciMMIR: Benchmarking Scientific Multi-modal Information Retrieval. *Findings of Association for Computational Linguistics*. https://aclanthology.org/2024.findings-acl.746/ (2024).
6. Zhang, G. *et al.* Map-neo: Highly capable and transparent bilingual large language model series. *ArXiv* **abs/2405.19327.** https://arxiv.org/abs/2405.19327 (2024).

2023

7. Wang, Z. *et al.* Interactive Natural Language Processing. *To be appear on Springer Nature*. https://arxiv.org/abs/2305.13246 (2023).
8. Xiao, C., **Li, Y.**, Hudson, G. T., Lin, C. & Moubayed, N. A. Length is a Curse and a Blessing for Document-level Semantics. *Conference on Empirical Methods in Natural Language Processing*. https://aclanthology.org/2023.emnlp-main.86/ (2023).
9. Yuan, R. *et al.* MARBLE: Music Audio Representation Benchmark for Universal Evaluation. *Advances in Neural Information Processing Systems 36*. https://proceedings.neurips.cc/paper_files/paper/2023/hash/7cbeec46f979618beafb4f46d8f39f36-Abstract-Datasets_and_Benchmarks.html (2023).
10. Zhang, G. *et al.* Chinese open instruction generalist: A preliminary release. *ArXiv* **abs/2304.07987.** https://arxiv.org/abs/2304.07987 (2023).

2022

11. **Li, Y.**, Fan, W., Liu, C., Lin, C. & Qian, J. TranSHER: Translating Knowledge Graph Embedding with Hyper-Ellipsoidal Restriction. *Conference on Empirical Methods in Natural Language Processing*. https://aclanthology.org/2022.emnlp-main.583/ (2022).
12. **Li, Y.** *et al.* HERB: Measuring Hierarchical Regional Bias in Pre-trained Language Models. *Findings of Asia-Pacific Chapter of Association for Computational Linguistics*. https://aclanthology.org/2022.findings-aacl.32/ (2022).
13. **Li, Y.** *et al.* Large-Scale Pretrained Model for Self-Supervised Music Audio Representation Learning. *Digital Music Research Network*. https://qmro.qmul.ac.uk/xmlui/handle/123456789/83372 (2022).
14. **Li, Y.** *et al.* Map-music2vec: A simple and effective baseline for self-supervised music audio representation learning. *ISMIR Late Breaking Demos*. https://ismir2022program.ismir.net/lbd_410.html (2022).

2021

15. Cheng, M., **Li, Y.**, Nazarian, S. & Bogdan, P. From rumor to genetic mutation detection with explanations: a GAN approach. *Scientific Reports* **11,** 1–14. https://www.nature.com/articles/s41598-021-84993-1 (2021).
16. **Li, Y.**, Liu, Z., Xiong, C. & Liu, Z. More Robust Dense Retrieval with Contrastive Dual Learning. *ACM SIGIR International Conference on Theory of Information Retrieval*. https://dl.acm.org/doi/10.1145/3471158.3472245 (2021).