Dingjie James Song

CONTACT INFORMATION	Lehigh University Bethlehem Pennsylvania USA	Email Home Page GitHub Google Scholar

EDUCATION

Ph.D. in Computer Science, Lehigh University, Bethlehem, PA, USA **Present**

Advisor: Dr. Lichao Sun

Master of Software Engineering, Nanjing University, Nanjing, China **June 2023**

Advisors: Dr. Xinyu Dai, Dr. Jidong Ge

GPA: 4.4/5.0

Bachelor of Software Engineering, Nanjing University, Nanjing, China **June 2021**

Advisors: Dr. Xinyu Dai, Dr. Jidong Ge

GPA: 4.3/5.0

RESEARCH INTERESTS

My primary research interests are centered around multimodal learning, particularly in the development and exploration of embodied AI models that integrate vision, language, and action (Vision-Language-Action Models). My recent focus has been on creating intelligent agentic systems capable of perceiving their environments, comprehending multimodal inputs, and performing meaningful interactions within dynamic contexts. Additionally, my research extends into domain-specific large language models (LLMs), including medical and multilingual LLMs. Prior to my current focus, I established a strong foundational expertise in task-oriented dialogue systems within the broader field of Natural Language Processing (NLP).

SUBMITTED PUBLICATIONS

18. **Dingjie Song**, Tianlong Xu, Yifan Zhang, Hang Li, Zhiling Yan, Xing Fan, Haoyang Li, Lichao Sun, Qingsong Wen. (2025). *Can MLLMs Read Students' Minds? Unpacking Multimodal Error Analysis in Handwritten Math.* [*Under Review*].

17. Zhejian Yang, Yongchao Chen, Xueyang Zhou, Jiangyue Yan, **Dingjie Song**, Yinuo Liu, Yuting Li, Yu Zhang, Pan Zhou, Hechang Chen, Lichao Sun. (2025) *Agentic Robot: A Brain-Inspired Framework for Vision-Language-Action Models in Embodied Agents.* [arXiv:2505.23450]. *Preprint.*

16. Tao Yu, Yi-Fan Zhang, Chaoyou Fu, Junkang Wu, Jinda Lu, Kun Wang, Xingyu Lu, Yunhang Shen, Guibin Zhang, **Dingjie Song**, Yibo Yan, Tianlong Xu, Qingsong Wen, Zhang Zhang, Yan Huang, Liang Wang, Tieniu Tan. (2025). *Aligning Multimodal LLM with Human Preference: A Survey.* [arXiv:2503.14504]. *Preprint.*

15. Guiyao Tie, Zeli Zhao, **Dingjie Song**, Fuyang Wei, Rong Zhou, Yurou Dai, Wen Yin, Zhejian Yang, Jiangyue Yan, Yao Su, Zhenhan Dai, Yifeng Xie, Yihan Cao, Lichao Sun, Pan Zhou, Lifang He, Hechang Chen, Yu Zhang, Qingsong Wen, Tianming Liu, Neil Zhenqiang Gong, Jiliang Tang, Caiming Xiong, Heng Ji, Philip S. Yu, Jianfeng Gao (2025). *A Survey on Post-training of Large Language Models.* [arXiv:2503.06072]. *Preprint.*

14. Yi-Fan Zhang, Hang Li, **Dingjie Song**, Lichao Sun, Tianlong Xu, Qingsong Wen. (2025). *From Correctness to Comprehension: AI Agents for Personalized Error Diagnosis in Education.* [arXiv:2502.13789]. *Preprint.*

13. Yuhao Du, Shunian Chen, Wenbo Zan, Peizhao Li, Mingxuan Wang, **Dingjie Song**, Bo Li, Yan Hu, Benyou Wang. (2024). *BlenderLLM: Training Large Language Models for Computer-Aided Design with Self-improvement.* [arXiv:2412.14203]. *Preprint.*

ACCEPTED
PUBLICATIONS

12. Xidong Wang*, **Dingjie Song*** (equal contribution), Shunian Chen, Chen Zhang, Benyou Wang. (2024). *LongLLaVA: Scaling Multi-modal LLMs to 1000 Images Efficiently via Hybrid Architecture.* [arXiv:2409.02889].
EMNLP Findings 2025

11. **Dingjie Song***, Sicheng Lai* (equal contribution), Shunian Chen, Lichao Sun, Benyou Wang. (2024). *Both Text and Images Leaked! A Systematic Analysis of Multimodal LLM Data Contamination.* [arXiv:2411.03823].
EMNLP Findings 2025, ICML 2025 BIG-BUG Workshop Oral

10. Zhiling Yan, Sifan Song, **Dingjie Song**, Yiwei Li, Rong Zhou, Weixiang Sun, Zhennong Chen, Sekeun Kim, Hui Ren, Tianming Liu, Quanzheng Li, Xiang Li, Lifang He, Lichao Sun. (2025). *SAMed-2: Selective Memory Enhanced Medical Segment Anything Model.* [arXiv:2507.03698].
MICCAI 2025

9. Zhenyang Cai, Junying Chen, Rongsheng Wang, Weihong Wang, Yonglin Deng, **Dingjie Song**, Yize Chen, Zixu Zhang, Benyou Wang. (2024). *On the Compositional Generalization of Multimodal LLMs for Medical Imaging.* [arXiv:2412.20070].
ACL 2025

8. Wentao Ge, Shunian Chen, Guiming Hardy Chen, Zhihong Chen, Junying Chen, Shuo Yan, Chenghao Zhu, Ziyue Lin, Wenya Xie, Xinyi Zhang, Yichen Chai, Xiaoyu Liu, **Dingjie Song**, Xidong Wang, Anningzhe Gao, Zhiyi Zhang, Jianquan Li, Xiang Wan, Benyou Wang. (2023). *MLLM-Bench: Evaluating Multimodal LLMs with Per-sample Criteria.* [arXiv:2311.13951]
NAACL 2025

7. **Dingjie Song**, Wenjun Wang, Shunian Chen, Xidong Wang, Michael Guan, Benyou Wang. (2024). *Less is More: A Simple yet Effective Token Reduction Method for Efficient Multi-modal LLMs.* [arXiv:2409.10994]
COLING 2025

6. **Dingjie Song**, Shunian Chen, Guiming Hardy Chen, Fei Yu, Xiang Wan, Benyou Wang. (2024). *MileBench: Benchmarking MLLMs in Long Context.* [arXiv:2404.18532]
COLM 2024

5. Junying Chen, Xidong Wang, Anningzhe Gao, Feng Jiang, Shunian Chen, Hongbo Zhang, **Dingjie Song**, Wenya Xie, Chuyi Kong, Jianquan Li, Xiang Wan, Haizhou Li, Benyou Wang. (2023). *HuatuoGPT-II, One-stage Training for Medical Adaption of LLMs.* [arXiv:2311.09774]
COLM 2024

4. Xidong Wang*, Guiming Hardy Chen*, **Dingjie Song*** (equal contribution), Zhiyi Zhang, Zhihong Chen, Qingying Xiao, Feng Jiang, Jianquan Li, Xiang Wan, Benyou Wang, Haizhou Li. (2024) *CMB: A Comprehensive Medical Benchmark in Chinese.* [arXiv:2308.08833]
NAACL 2024

3. Huang Huang*, Fei Yu*, Jianqing Zhu* (equal contribution), Xuening Sun, Hao Cheng, **Dingjie Song**, Zhihong Chen, Abdulmohsen Alharthi, Bang An, Juncai He, Ziche Liu, Zhiyi Zhang, Junying Chen, Jianquan Li, Benyou Wang, Lian Zhang, Ruoyu Sun, Xiang Wan, Haizhou Li, Jinchao Xu. (2024) *AceGPT, Localizing Large Language Models in Arabic.* [arXiv:2309.12053]
NAACL 2024

2. Pengfei Sun*, **Dingjie Song*** (equal contribution), Yawen Ouyang, Zhen Wu, Xinyu Dai. (2023) *Episode-based Prompt Learning for Any-shot Intent Detection.* Springer
NLPCC 2023 Oral

1. Pengfei Sun, Yawen Ouyang, **Dingjie Song**, Xinyu Dai. (2022) *Self-Supervised Task Augmentation for Few-Shot Intent Detection.* Springer
JCST 2022

RESEARCH
EXPERIENCE

Research Intern, Squirrel AI   **October 2024–January 2025**
Mentor: Dr. Tianlong Xu and Dr. Qingsong Wen
Focus: Multimodal LLM and Math LLM.

Research Assistant, The Chinese University of Hong Kong, Shenzhen   **July 2023–September 2024**
Mentor: Dr. Benyou Wang
Focus: Multimodal LLM, Medical LLM, and Multilingual LLM.

NLP Research Intern, International Digital Economy Academy (IDEA) **July 2022–May 2023**
Mentor: Dr. Jiaxing Zhang
Focus: In-context learning and Code LLM.

Graduate Student, NLP Group, Nanjing University   **August 2021–June 2022**
Advisor: Dr. Xinyu Dai
Focus: Low-resource spoken language understanding.

HONORS AND
AWARDS

Outstanding Graduate Student, Nanjing University   **2023**

Yingcai Scholarship, Nanjing University   **2022**

Renmin Scholarship (Peoples Scholarship), Nanjing University   **2018–2021**

Third Runner's Up in 15th Citi Cup Financial Innovation Application Competition, Citigroup   **2019**

Second Runner's Up in 2019 "Chain to Future" University Blockchain Technology Application Competition, CCF   **2019**

Outstanding Student Leader of the Communist Youth League, Nanjing University **2018–2019**

SKILLS

Computer Skills: Proficient in Python, Java, JavaScript, SQL, HTML/CSS. Experience with PyTorch, DeepSpeed, Colossal-AI, FAISS, Elastic Search, Spark, Git, LaTeX, ssh.
Natural languages: English, Mandarin, Cantonese.