XINPENG LI

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SUMMARY

Ph.D. student in Computer Science at UT Dallas (advised by Prof. Yapeng Tian). My research includes multimodal large language models, audio-visual social signal processing, and dataset/benchmark development for human-centric interaction. I have published papers in ACM MM, IEEE TMM, NeurIPS and released multiple datasets, benchmarks, and open-source systems.

EDUCATION

University of Texas at Dallas, Dallas, TX, U.S.A. *Aug. 2024 - Present*
Doctor of Philosophy in Computer Science
Advisor: Prof. Yapeng Tian

South China University of Technology, Guangzhou, P.R.China *Sept. 2018 - June 2021*
Master of Engineering in Signal and Information Processing
Advisor: Prof. Dacheng Tao

South China University of Technology, Guangzhou, P.R.China *Sept. 2014 - June 2018*
Bachelor of Engineering in Information Engineering

RESEARCH EXPERIENCE

Computer Vision and Multimodal Computing Lab, UT Dallas *Aug. 2024 - Present*
Research Assistant Supervisor: Prof. Yapeng Tian
- Research on **audio-visual pipelines** for multimodal social interaction datasets, covering speech diarization, active speaker detection, and representation learning
- Developed end-to-end **MLLM-based reasoning systems** on top of these pipelines, integrating forecasting and demo prototypes for online social interaction understanding

MIPS Lab, SZTU & VIP Lab, SUSTech *Jun. 2021 – Jul. 2024*
Research Assistant Mentors: Profs. Xiaojiang Peng, Feng Zheng, Jinbao Wang
- Led projects on railway detection, emotion recognition and context-aware affective computing (MIPS) and contributed to dataset and benchmark of 3D anomaly detection (VIP, Jan. 23 to Jul. 23)
- Released datasets, benchmarks, and baseline models for railway detection, emotion recognition and anomaly detection, enabling reproducible multimodal research

PUBLICATIONS (SELECTED)

1. **Towards Online Multi-Modal Social Interaction Understanding**. [PDF] [Code]
   Xinpeng Li, Shijian Deng, Bolin Lai, Weiguo Pian, James M. Rehg, Yapeng Tian.
   Preprint, 2025.
   Proposed a VLM pipeline with forecasting and prompting for online social interaction understanding.

2. **Two in One Go: Single-stage Emotion Recognition with Decoupled Subject-context Transformer**. [PDF] [Code]
   Xinpeng Li, Teng Wang, Jian Zhao, Shuyi Mao, Jinbao Wang, Feng Zheng, Xiaojiang Peng, Xuelong Li.
   ACM Multimedia, 2024.
   Designed a decoupled subject–context transformer for effective visual emotion recognition.

3. **Facial Action Units as A Bridge of Joint Dataset Training for Facial Expression Recognition**. [PDF] [Code]
   Shuyi Mao, **Xinpeng Li**, Fan Zhang, Xiaojiang Peng, Yang Yang.
   IEEE Transactions on Multimedia, 2024.
   Leveraged facial action units as intermediate representations to improve multi-dataset learning.

4. **Real3D-AD: A Dataset of Point Cloud Anomaly Detection**. [PDF] [Code]
   Jiaqi Liu, Guoyang Xie, Ruitao Chen, **Xinpeng Li**, Jinbao Wang, Yong Liu, Chengjie Wang, Feng Zheng.
   NeurIPS Datasets and Benchmarks Track, 2023.
   Released the first real-world 3D point cloud anomaly detection dataset with standardized benchmarks.

5. **Rail Detection: An Efficient Row-based Network and A New Benchmark**. [PDF] [Code]
   Xinpeng Li, Xiaojiang Peng.
   ACM Multimedia, 2022.
   Introduced a new row-based rail detection dataset and proposed an efficient row-based model.

HONORS & AWARDS

Top 11% in Competition on Affective Behavior Analysis in-the-wild (ECCV)	*2022*
Top 6% in Multimodal Sentiment Analysis Challenge (ACM MM)	*2021*
Top 9% in Short Video Face Parsing Challenge (CVPR)	*2021*
Multiple scholarships including National and University-level	*2015-2020*

ACADEMIC SERVICES

Conference Reviewer:
ACM Multimedia 2024, ACM Multimedia 2023, ICCV 2025
Teaching Assistant:
Computer Science II (CS2336) Summer 2025, Operating System (CS4348) Fall 2025