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EDUCATION

| | |
|---|---------------------|
| The Hong Kong University of Science and Technology | Hong Kong, China |
| Ph.D in <i>Computer Science</i> | Feb 2020 - now |
| Supervised by Prof. James T. Kwok | |
| The Chinese University of Hong Kong | Hong Kong, China |
| M.Sc. in <i>Computer Science</i> | Sep 2018 - Jul 2019 |
| Supervised by Prof. Bei Yu | |
| GPA: 3.39/4.0 | |
| Tongji University | Shanghai, China |
| B.Eng. in <i>Software Engineering</i> | Sep 2014 - Jul 2018 |
| GPA: 91.2/100 | |
| Ranking: 6/182 (overall) 1/32(Multimedia Science) | |

EXPERIENCE

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| Huawei Noah's Ark Lab | Hong Kong, China |
| Intern @ <i>AI theory Lab</i> , supervised by Prof. Zhenguo Li | Jun 2019 - Now |
| The Chinese University of Hong Kong | Hong Kong, China |
| Research Assistant, supervised by Prof. Bei Yu | Sep 2018 - May 2019 |
| Microsoft Research Asia | Beijing, China |
| Intern @ <i>Intelligent Multimedia Group</i> , supervised by Dr. Chong Luo | Jan 2018 - Jul 2018 |
| CCi Intelligence Co., Ltd | Shanghai, China |
| Research Intern | Jul 2017 - Jan 2018 |

SELECTED PUBLICATIONS

Full publication list on my [Google Scholar](#). (* denotes equal contribution)

I. Multi-modal Foundation Models

- [1] **EMOVA: Empowering Language Models to See, Hear and Speak with Vivid Emotions** CVPR 2025
Kai Chen*, Yunhao Gou*, Runhui Huang*, **Zhili Liu***, Dixin Tan*, and other 26 authors
- [2] **Corrupted but Not Broken: Understanding and Mitigating the Negative Impacts of Corrupted Data in Visual Instruction Tuning** EMNLP 2025 Oral
Yunhao Gou, Hansi Yang, **Zhili Liu**, Kai Chen, Yihan Zeng, Lanqing Hong, Zhenguo Li, Qun Liu, Bo Han, James Kwok, Yu Zhang

II. Multi-modal Foundation Models - Mixture of Cluster-conditional Experts

- [3] **Mixture of Cluster-conditional LoRA Experts for Vision-language Instruction Tuning** TIP 2026
Yunhao Gou*, **Zhili Liu***, Kai Chen*, Lanqing Hong, Hang Xu, Aoxue Li, Dit-Yan Yeung, James T. Kwok, Yu Zhang

- [4] Task-customized Masked Autoencoder via Mixture of Cluster-conditional Experts ICLR 2023 **Spotlight**
Zhili Liu, Kai Chen, Jianhua Han, Lanqing Hong, Hang Xu, Zhenguo Li, James Kwok

- [5] Task-Customized Self-Supervised Pre-training with Scalable Dynamic Routing AAAI 2022
Zhili Liu, Jianhua Han, Kai Chen, Lanqing Hong, Hang Xu, Chunjing Xu, Zhenguo Li

III. Multi-modal Foundation Models - Model Safety & Reasoning

- [6] Perceptual Decoupling for Scalable Multi-modal Reasoning ICLR 2026
via Reward-Optimized Captioning
Yunhao Gou*, Kai Chen*, **Zhili Liu***, Lanqing Hong, Xin Jin, Zhenguo Li, James T. Kwok, Yu Zhang

- [7] Mixture of insightful Experts (MoTE): The Synergy of Thought Chains and Expert Mixtures in Self-Alignment ACL 2025
Zhili Liu*, Yunhao Gou*, Kai Chen*, Lanqing Hong, Jiahui Gao, Fei Mi, Yu Zhang, Zhenguo Li, Xin Jiang, Qun Liu, James T. Kwok

- [8] AtomThink: Multimodal Slow Thinking with Atomic Step Reasoning TPAMI 2025
Kun Xiang*, **Zhili Liu***, Terry Jingchen Zhang, Yinya Huang, Yunshuang Nie, Kaixin Cai, Yiyang Yin, Runhui Huang, Hanhui Li, Yihan Zeng, Yu-Jie Yuan, Jianhua Han, Lanqing Hong, Hang Xu, Xiaodan Liang

- [9] Implicit Concept Removal of Diffusion Models ECCV 2024
Zhili Liu, Kai Chen, Yifan Zhang, Jianhua Han, Lanqing Hong, Hang Xu, Zhenguo Li, Dit-Yan Yeung, James Kwok

- [10] Eyes Closed, Safety On: Protecting Multimodal LLMs via Image-to-Text Transformation ECCV 2024
Yunhao Gou*, Kai Chen*, **Zhili Liu***, Lanqing Hong, Hang Xu, Zhenguo Li, Dit-Yan Yeung, James Kwok, Yu Zhang

IV. Model Efficiency

- [11] MoPE-CLIP: Structured Pruning for Efficient Vision-Language Models with Module-wise Pruning Error Metric CVPR 2024
Haokun Lin, Haoli Bai, **Zhili Liu**, Lu Hou, Muyi Sun, Linqi Song, Ying Wei, Zhenan Sun

- [12] DiffFit: Unlocking Transferability of Large Diffusion Models via Simple Parameter-Efficient Fine-Tuning ICCV 2023 **Oral**
Enze Xie, Lewei Yao, Han Shi, **Zhili Liu**, Daquan Zhou, Zhaoqiang Liu, Jiawei Li, Zhenguo Li

PATENT

[CN112633385A] **Zhili Liu**, Qijun Luo, Lanqing Hong, Chongxuan Li, Jun Zhu, Zhenguo Li. *Relaxed conditional image transfer for semi-supervised domain adaptation*, Published at Apr 8th, 2025

[CN111291809A] Hang Xu, **Zhili Liu**, Fengwei Zhou, Jiawei Li, Xiaodan Liang, Zhenguo Li, Li Qian *EHSOD: CAM-Guided End-to-end Hybrid-Supervised Object Detection with Cascade Refinement*, Published at Apr 12th, 2024

SELECTED HONOURS

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|---|----------------|
| CUHK Entrance Scholarship & Distinguished Academic Performance Scholarship (top 3%) | 2019/2018 |
| Shanghai Outstanding Graduates, Shanghai (Top 5%) | 2018 |
| Scholarship for Outstanding Student, Tongji University (Top 5%) | 2017/2016/2015 |

ACADEMIC SERVICES

Conference Reviewer

ICLR, ICML, NeurIPS, CVPR, ICCV, ECCV, AAAI, IJCAI

Journal Reviewer

TPAMI, TIP, TNNLS, AIJ