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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

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 2025
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] 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

- [7] 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

- [8] Perceptual Decoupling for Scalable Multi-modal Reasoning via Reward-Optimized Captioning ArXiv 2025

Yunhao Gou*, Kai Chen*, **Zhili Liu***, Lanqing Hong, Xin Jin, Zhenguo Li, James T. Kwok, Yu Zhang

- [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

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