Fanqing Meng

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Research interests: *Multimodel Learning, Transfer Learning, Foundation Model*

Education Background

Shanghai Jiaotong University *2023 - 2028 (Expected)*
PhD Student
Advisor: Ping Luo

Tongji University *2019 - 2023*
Bachelor of Software Engineering
GPA:4.82/5 Rank:7/212:

Research Experiences

[1]: Foundation Model is Efficient Multimodal Multitask Model Selector (**NIPS 2023**) by **Fanqing Meng**, Wenqi Shao, Zhanglin Peng, Chonghe Jiang, Kaipeng Zhang, Yu Qiao, Ping Luo

- We introduce an efficient multi-task model selector (EMMS), which transforms different label formats of various downstream tasks into a unified noisy label embedding to evaluate a model's transferability. EMMS proves to be fast, effective, and versatile, establishing itself as the first model selection method in a multi-task scenario.

[2]: An Efficient Transformer for Demosaicing via Compressed Multi-branch Attention Mechanism (**ICASSP 2024**) by Xun Wu*, **Fanqing Meng***, Yaqi Wu, Jiawei Zhang, Feng Zhang

- Proposed ECMT is an efficient and effective demosaicing approach that addresses the limitations of existing methods. It efficiently captures long-range spatial dependencies and reduces computational costs through innovative components. which have great results and lower computational requirements.

[3]: ChartAssisstant: A Universal Chart Multimodal Language Model via Chart-to-Table Pre-training and Multitask Instruction Tuning (preprint) by **Fanqing Meng**, Wenqi Shao, Quanfeng Lu, Peng Gao, Kaipeng Zhang, Yu Qiao, Ping Luo

- ChartAssistant: an advanced chart-based vision-language model that excels in comprehending and reasoning with diverse chart types with two-stage training strategy, surpassing state-of-the-art methods and achieving impressive performance on real-world chart data.

[3]: MMT-Bench: A Multimodal MultiTask Benchmark for Comprehensive Evaluation of Large Vision-Language Models (ICML2024) by Kaining Ying*, **Fanqing Meng***, Jing Wang*, ... , Ping Luo , Wenqi Shao

- MMT-Bench is a comprehensive benchmark designed to rigorously evaluate Large Vision-Language Models (LVLMs) across diverse, expert-level multimodal tasks, enhancing the development of multimodal intelligence.

[4]: CAU: A Causality Attention Unit for Spatial-temporal Sequence Forecast (**TMM**) by Bo Qin, **Fanqing Meng**, Xianghui Fang, Guokun Dai, Shijin Yuan, Bin Mu

[5]: Lvlm-ehub: A comprehensive evaluation benchmark for large vision-language models (preprint) by Peng Xu, Wenqi Shao, Kaipeng Zhang, Peng Gao, Shuo Liu, Meng Lei, **Fanqing Meng**, Siyuan Huang, Yu Qiao, Ping Luo

[6]: Tiny lvlm-ehub: Early multimodal experiments with bard (preprint) by Wenqi Shao, Yutao Hu, Peng Gao, Meng Lei, Kaipeng Zhang, **Fanqing Meng**, Peng Xu, Siyuan Huang, Hongsheng Li, Yu Qiao, Ping Luo

[7]: OTST: A Two-Phase Framework for Joint Denoising and Remosaicing in RGBW CFA (**CVPR2023 Workshop**) by Zhihao Fan, Xun Wu, **Fanqing Meng**, Yaqi Wu, Feng Zhang

Award

Tongji University First Class Scholarship (top 5%) *2020,2021,2022*

2nd Mobile Intelligent Photography and Imaging WorkShop *2023*

Research Experiences

SenseTime *July 2022 - Dec 2022*
Research Intern (low level vision) Shanghai
Advisor: Dr. Jiawei Zhang

Shanghai AI Lab *Jan 2023 -*
Research Intern (foundation model) Shanghai
Advisor: Dr. Wenqi Shao

Services

Reviewer of CVPR2024