JIAZHEN LIU

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EDUCATION

Ph.D. Candidate at HKUST Hong Kong, China — Sep 2024 ▸ Now

In CSE department, supervised by Prof. CHEN, Long; **GPA: 4.0/ 4.3**

Master at Renmin University of China Beijing, China — Sep 2021 ▸ Jun 2024

Major in Computer Application Technology; **GPA: 3.59 / 4**

B.S. at Shandong University Shandong, China — Sep 2017 ▸ Jun 2021

Major in Computer Science; **GPA: 4.68 / 5**

SELECTED PUBLICATIONS

1. **Jiazhen Liu**, Yuhan Fu, Ruobing Xie, Runquan Xie, Xingwu Sun, Fengzong Lian, Zhanhui Kang, Xirong Li. PhD: A ChatGPT-Prompted Visual Hallucination Evaluation Dataset. **CVPR**, 2025
   - A comprehensive study on the sources of visual hallucinations in MLLMs and targeted benchmark design.
   - 3 types of visual hallucination data: visual confusions, language biases, and knowledge contradictions.

   Code: https://github.com/jiazhen-code/PhD.

2. **Jiazhen Liu**, Xirong Li. Geometrized Transformer for Self-Supervised Homography Estimation. **ICCV**, 2023
   - GeoFormer, a new detector-free feature matching method for homography estimation.
   - Using the classical RANSAC geometry for attentive region search.

   Code: https://github.com/ruc-aimc-lab/GeoFormer.

3. **Jiazhen Liu**, Xirong Li, Qijie Wei, Jie Xu, Dayong Ding. Semi-Supervised Keypoint Detector and Descriptor for Retinal Image Matching. **ECCV**, 2022
   - SuperRetina, the first end-to-end method for RIM with jointly trainable keypoint detector and descriptor.
   - Enhance the keypoint labels during each training epoch, mitigating the limitations of manual labeling.

   Code: https://github.com/ruc-aimc-lab/SuperRetina.

INTERNSHIPS

Tencent · **Beijing** — Feb 2023 ▸ Mar 2024

Hunyuan Large Model Pre-training Team (MLLM):

- Participated in the development of a multimodal large language model (**MLLM**), contributing to Tencent's **Hunyuan** large model, which integrates both visual and textual information.
- Addressing hallucination issues in MLLMs, with results published at CVPR.

Highlights: Successfully conducted research and constructed a MLLM from scratch.

ByteDance · **Beijing** — Sep 2022 ▸ Mon 2023

Platform Governance Team (Computer Vision):

- Designed a matching model for detecting image infringements in product images;
- Conducted the research and ultimately translated it into a research paper.

Highlights: By integrating job tasks with research content, we addressed business challenges and generated an ICCV paper.

AWARDS AND HONORS

RedBird Ph.D. Award — Sep 2024

National Scholarship (Graduate Students) — Sep 2023

National Scholarship (Undergraduate Students) for **three** consecutive years. — Dec 2018 ▸ Dec 2020