# JIAZHEN LIU

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#### EDUCATION

Ph.D. Candidate at HKUST Hong Kong, China 💡	E 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, Highlight, 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, X. 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 💡

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 ♀

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

Outstanding Master's Thesis Award of the Chinese Institute of ElectronicsImage: Mor 2025National Scholarship (Graduate Students)Image: Sep 2023National Scholarship (Undergraduate Students) for three consecutive years.Image: Dec 2018 • Dec 2020

Sep 2022 ► Mon 2023

🛱 Feb 2023 🕨 Mar 2024