JIAZHEN LIU

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EDUCATION

MSc Renmin University of China   Beijing, China 📍   📅 Sep 2021 ▸ Jun 2024

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

I am being mentored by Professor Xirong Li, specializing in the field of **Multimodality** / **Image matching**

B.S. Shandong University   Shandong, China 📍   📅 Sep 2017 ▸ Jun 2021

Major in Computer Science; **GPA: 93.56 / 100**

Courses: Advanced Mathematics (97), Linear Algebra (97), Probability Theory (100), Algorithms (97), Data Structures (100), Object-Oriented Technology (98.5), Advanced Programming Languages (98), Deep Learning (100).

PUBLICATIONS

1. **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.

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. Hongyang Du, **Jiazhen Liu**, Dusit Niyato, et al. Attention-aware resource allocation and QoE analysis for metaverse xURLLC services. **IEEE Journal on Selected Areas in Communications**, 2023 (IF: 16.4, Q1)

   Code: https://github.com/HongyangDu/AttentionQoE.

WORK EXPERIENCE

Algorithm Intern

Tencent · **Beijing** 📍   📅 Feb 2023 ▸ Now

Engaging in various research projects.:
   - Participated in the development of a multimodal large language model (**MLLM**);
   - Responsible for researching and addressing model hallucination issues, with the goal of producing research outcomes for the CVPR conference paper.

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

ByteDance · **Beijing** 📍   📅 Sep 2022 ▸ Mon 2023

Perform a range of tasks to support my team.

   - 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 a top-tier conference paper.

AWARDS AND HONORS

National Scholarship (Graduate Students)   📅 Sep 2023

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

National Second Prize in the National College Student Mathematical Modeling Competition   📅 Sep 2019