Jie Chu

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Research Interests: Computer Vision, Embodied AI

Education

School of Software Engineering, Tongji University Shanghai
Major: B.Eng in Software Engineering Sept. 2021 - Present

- **GPA**: 4.78/5.00, GPA Ranking: 6.7% (15/225)
- **Honors and Awards**: Merit Student (Top 1%), The First Prize Scholarship (Top 5%)
- **Leadership**: Deputy Minister of Google Club in Tongji University

Research Experience

Tongji University, Embodied Perception and Computing Lab Shanghai
Undergraduate Reasearch Assistant Apr. 2023 - Present

- Supervised by Prof. Guang Chen and Prof. Changjun Jiang.
- **Streaming Perception for Event-Based Object Tracking:** We present a novel STream-based ONline Evaluation (STONE) framework for event-based VOT. STONE not only leverages the continuity of event streams to exploit tracker's online capabilities, but also reveals tracker's real-time performance by replicating real-world online scenarios. Accompanying STONE is our new dataset featuring time-aligned, high-frequency annotations. We also propose two effective tracker enhancement strategies which stand out for their utilization of the event modality characteristics. (First author, Submitted to ECCV)
- **Hand-Object Interaction 3D Reconstruction:** Transcribe existing RGB datasets into event streams for hand-object interaction 3D reconstruction, then benchmark against RGB-based algorithms, leading to the development of a novel event stream-based 3D reconstruction method.

Project Experience

Building Curtain Wall Crack Detection System Shanghai
Team Member Sep. 2023 - Present

- UAV Aerial Photography to obtain 3D models of buildings.
- Adopts YOLOv8 for detecting curtain wall panels, uses the SAM model for segmentation, and proposes a Unet-based CrackNet to identify cracks within each panel.

ChatEase : Streamlined Server Chatbot Configuration Tool Shanghai
Sole Developer Nov. 2023 - Jan. 2024

- Facilitates easy and efficient chatbot setup and management with browser-accessible interfaces.
- Supports Retrieval-Augmented Generation and multi-modality functionalities.

Awards & Services

- 2^{st} **Prize:** COMAP's Mathematical Contest in Modeling, May. 2023
- 2^{st} **Prize:** Asia and Pacific Mathematical Contest in Modeling, April. 2023
- **Merit Student:** Tongji University, Dec. 2022
- **Undergraduate Social Activity Scholarship:** Tongji University, Dec. 2020
- **Deputy Minister:** Tongji University Google Club, Sep. 2023 - Present

Languages & Skills

- **Languages:** Mandarin(Native), English(IELTS: 6.5)
- **Programming Languages and Frameworks:** C/C++, Python, Matlab, Java, Pytorch, C#, MySQL, HTML/CSS/JavaScript