ZHENYU WEI

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EDUCATION

Shanghai Jiao Tong University (SJTU), China — Sep. 2021 - Jun. 2025 (expected)
B.E. in Computer Science (Zhixuan Honors Program of Engineering) — **GPA:** 4.01/4.3 (92.45/100)

PUBLICATIONS

1. $\mathcal{D}(\mathcal{R},\mathcal{O})$ **Grasp: A Unified Representation for Cross-Embodiment Dexterous Grasping** [Web]
   Zhenyu Wei*, Zhixuan Xu*, Jingxiang Guo, Yiwen Hou, Chongkai Gao, Zhehao Cai, Jiayu Luo, Lin Shao
   In submission to *IEEE International Conference on Robotics & Automation* (ICRA) 2025.
   CoRL 2024 Workshop MAPoDeL. Best Robotics Paper Award & Oral Presentation
   CoRL 2024 Workshop LFDM. Oral Presentation
2. **Auto-Pairing Positives through Implicit Relation Circulation for Discriminative Self-Learning**
   Bo Pang, **Zhenyu Wei**, Jingli Lin, Cewu Lu
   In submission (Minor Revisions) to *IEEE Transactions on Pattern Analysis and Machine Intelligence* (TPAMI).

RESEARCH EXPERIENCE

Research Intern, Machine Vision and Intelligence Group — Oct. 2022 - May 2024
Advisor: Prof. Cewu Lu — Shanghai Jiao Tong University, China

- We propose the Implicit Relation Circulation (IRC) framework, leveraging cycle consistency to automatically discover positive pairs from easily obtainable pairs within simpler tasks.
- We apply IRC to tasks such as learning pixel-level relations from image-level pairs, 3D temporal multi-modal point cloud relations, and image representation leveraging language without existing vision-language pairs.

Research Assistant, LinS Lab — Jun. 2024 - present
Advisor: Prof. Lin Shao — National University of Singapore, Singapore

- We propose a novel representation, $\mathcal{D}(\mathcal{R},\mathcal{O})$, tailored for dexterous grasping tasks. This interaction-centric formulation transcends conventional robot-centric and object-centric paradigms, facilitating robust generalization across diverse robots, objects, and environments.
- We propose a configuration-invariant pretraining approach that learns correspondences across different robot configurations, enhancing the model's capability to capture motion constraints for robotic hands.
- We perform extensive experiments in both simulation environments and real-world settings, validating the efficacy of our proposed representation and framework in grasping novel objects with multiple robots.

AWARDS

- The Tung Foundation Scholarship (Top 5%) — 2022
- Huawei Scholarship (Top 5%) — 2023
- Outstanding Scholarship of Computer Science Alumni Fund (Top 5%) — 2024
- Zhiyuan Honors Scholarship (Top 5%) — 2021 & 2022 & 2023
- SJTU Merit Student & Merit Scholarship (Top 10%) — 2022 & 2023

MISCELLANEOUS

Language	Chinese (Native), English (TOEFL: 104), Japanese (amateur)
Academic Service	Reviewer for ICRA 2025
Programming	Python, C/C++, HTML, CSS, ROS, Assembly Language, Verilog
Tools	LaTeX, Linux, Vim, Isaac Gym, Arduino