ZHENYU WEI

EDUCATION

Shanghai Jiao Tong University (SJTU), China

Sep. 2021 - Jun. 2025 (expected)

B.E. in Computer Science (Zhiyuan Honors Program of Engineering)

GPA: 4.0/4.3 (92.1/100)

PUBLICATIONS

- 1. Jingxiang Guo*, Jiayu Luo*, **Zhenyu Wei***, Yiwen Hou, Zhixuan Xu, Xiaoyi Lin, Chongkai Gao, Lin Shao, "TelePhantom: A User-Friendly Teleoperation System with Virtual Assistance for Enhanced Effectiveness". In submission to *RA-L*. [Web]
- 2. Haonan Chen, Junxiao Li, Ruihai Wu, Yiwei Liu, Chongkai Gao, Zhixuan Xu, Yiwen Hou, Jingxiang Guo, **Zhenyu Wei**, Siang Chen, Chenting Wang, Shensi Xu, Jiaqi Huang, Weidong Wang, Lin Shao, "MetaFold: Language-Guided Cross-Category Garment Folding Framework via Trajectory Generation and Foundation Model". In submission to *CVPR 2025*. [Web]
- 3. **Zhenyu Wei***, Zhixuan Xu*, Jingxiang Guo, Yiwen Hou, Chongkai Gao, Zhehao Cai, Jiayu Luo, Lin Shao, " $\mathcal{D}(\mathcal{R}, O)$ Grasp: A Unified Representation for Cross-Embodiment Dexterous Grasping". In submission to ICRA 2025; CoRL 2024 @ MAPoDeL, Best Robotics Paper Award & Oral Presentation; CoRL 2024 @ LFDM, Spotlight Presentation. [Web]
- 4. Bo Pang, **Zhenyu Wei**, Jingli Lin, Cewu Lu, "Auto-Pairing Positives through Implicit Relation Circulation for Discriminative Self-Learning". In submission (Minor Revisions) to *T-PAMI*.

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 for self-supervised learning, which leverages cycle consistency to automatically discover dense positive pairs from existing relations within simpler tasks. This approach enables effective representation learning across images, point clouds, and multi-modal data.

Research Assistant, LinS Lab

Jun. 2024 - present

Advisor: Prof. Lin Shao

National University of Singapore, Singapore

- Focused on **dexterous grasping** for cross-embodiment:
 - \circ We propose a novel interaction-centric representation, $\mathcal{D}(\mathcal{R}, O)$, combined with a configuration-invariant pretraining approach that learns correspondences across different robot configurations, enhancing grasping quality, efficiency, and generalizability across diverse robots, objects, and environments.
- Focused on **robot teleoperation**:
 - We propose a low-cost teleoperation system utilizing data gloves and IMU sensors, paired with an assistant module that improves data collection process by visualizing future robot operations through phantoms.

AWARDS

• Best Robotics Paper Award, CoRL 2024 @ MAPoDeL	2024
 Outstanding Scholarship of Computer Science Alumni Fund (Top 5%) 	2024
Huawei Scholarship (Top 5%)	2023
• The Tung Foundation Scholarship (Top 5%)	2022
• Zhiyuan Honors Scholarship (Top 5%)	2021 - 2024
 Merit Student & Merit Scholarship of Shanghai Jiao Tong University (Top 10%) 	2022 - 2024

MISCELLANEOUS

LanguageChinese (Native), English (TOEFL: 104), Japanese (amateur)ProgrammingPython, C/C++, HTML, CSS, Assembly Language, Verilog

Academic Service Reviewer for ICRA 2025