ZHENYU WEI

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EDUCATION

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

PUBLICATIONS

1. 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*.
2. **Zhenyu Wei***, Zhixuan Xu*, Jingxiang Guo, Yiwen Hou, Chongkai Gao, Zhehao Cai, Jiayu Luo, Lin Shao, "$\mathcal{D}(\mathcal{R},\mathcal{O})$ 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]
3. 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, 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

- Focused on **dexterous grasping** for cross-embodiment:
  - We propose a novel interaction-centric representation, $\mathcal{D}(\mathcal{R},\mathcal{O})$, that improves grasping quality and efficiency while enabling robust generalization across various 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.
- Contributed to real-world experiments in the garment folding project and to retargeting hand poses from Quest 3 to LeapHand in the teleoperation project.

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

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