Zeyu Ping

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EDUCATION

Sun Yat-sen University **Guangzhou, China**

Bachelor of Science, Computer Science and Technology *Anticipated June 2027*

- GPA: 3.5(85/100)
- Core Computer Courses: Computer Programming (91/100), Mathematical Analyses (90/100), Artificial Intelligence (97/100)
- Research Interests: Robot Learning, Dexterous Manipulation

PUBLICATIONS

- GuZhang, Qicheng Xu, **Zeyu Ping**, et. "*UniDex: A Robot Foundation Suite for Universal Dexterous Hand Control from Egocentric Human Videos",* CVPR 2026
- Weibing Li, Shan Zhang, **Zeyu Ping**, et. "*A quadratic programming framework unifying different types of visual servoing with obstacle avoidance for joint-constrained robots*", PRICAI 2025

RESEARCH EXPERIENCE

Learning Dexterous Manipulation from Human Videos **Beijing, China**

Undergraduate Researcher, TEA Lab, Tsinghua University *April 2025 – October 2025*

- **Extracted** hand pose sequences from monocular video using pose estimation algorithms and **reconstructed** high-fidelity 3D object meshes from RGB-D data.
- **Retargeted** human hand poses to dexterous robotic hands and **simulated** interactions within **Isaac Gym**.
- **Generated** large-scale synthetic datasets by replaying trajectories and capturing multi-view RGB-D images and joint states.
- **Refined** data quality using residual RL.
- **Acquired** high-precision ground truth manipulation data via teleoperation using **Apple Vision Pro**.

Sim2real: robot pianist **Beijing, China**

Undergraduate Researcher, TEA Lab, Tsinghua University *November 2025 – present*

- **Converted** the WUJI hand(Custom Dexterous Hand) assets from URDF to xml format; **optimized** simulation fidelity by fine-tuning physical parameters and simplifying collision meshes.
- **Integrated** a complete robotic system coupling a **UR5e** arm with the WUJI hand in MuJoCo.
- **Developed** Python-based task environments for RL training, implementing **Inverse Kinematics (IK)** for arm control and relative wrist control strategies which is helpful for better training.
- **Engineered** reward functions to facilitate policy learning and robust piano playing performance.

SKILLS

- Programming Languages: C / C++ / Python
- Technical Skills: Isaac Gym, MuJoCo
- Languages: English , Chinese(Native)