

Zhiyuan Ma

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About Me

I'm Zhiyuan Ma, an undergraduate of Peking University, class of 2022. I major in computer science, and is selected for the Top Selection plan(bajian plan). Now I'm studying embodied AI as an intern in professor Dong Hao 's PKU-Agibot lab, following the guidance of Jiyao Zhang.

Awards

- **Sept 2023**
Selected for the Top Selection Plan(Bajian Plan)
- **Dec 2023**
Merit Student (Academic Year 2022-2023)
Lingjun Pioneer Scholarship (Academic Year 2022-2023)
- **Oct 2024**
Tianchuang Scholarship (Academic Year 2023-2024)

Scores

GPA : 3.605 CET-4 : 607 CET-6 : 564

Experience

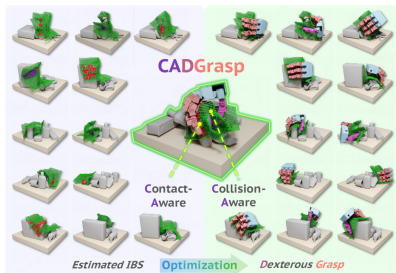
PKU-EPIC & Galbot joint lab May.2024 - July.2024
I studied deep learning, 3D representations, and fundamental robotics. I assisted in organizing articulated object datasets (GAPartNet, UnidoorManip, AKB48) and implemented some code practices based on DexGraspNet and curobo. I presented papers in group meetings and participated in lab discussions every week.

PKU-Hyperplane & Agibot joint Lab July 2024 – May 2025
During my internship at Agibot Lab, I focused on researching the application of 3D vision in embodied intelligence. The main research direction was to rapidly predict accurate and safe dexterous hand grasping poses under partial observation conditions based on a universal spatial grasping representation, and to execute them using motion planning and reinforcement learning, addressing a series of challenging issues such as complex scenes, cross-embodiment generalization, and functional grasping.

Skills

- Deep learning theory PyTorch implementation experience
- Diffusion model development experience
- Proficient in Isaac Gym simulation platform
- Theoretical Foundations in Imitation Learning and Reinforcement Learning

Publications



CADGrasp: Learning Contact and Collision Aware General Dexterous Grasping in Cluttered Scenes

Jiyao Zhang*, **Zhiyuan Ma***, Tianhao Wu, Zeyuan Chen, Hao Dong
May 2025

We propose CADGrasp, which learns a contact- and collision-aware intermediate representation as a constraint, and further obtains the dexterous grasp pose with an optimization method to achieve single-view dexterous hand grasping in cluttered scenes. Our method can easily transferred to zero-shot robotic hands, showing cross-embodiment generalization ability. *under review of Neurips 2025*