Mingxuan Wu

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EDUCATION

UNIVERSITY OF CALIFORNIA - BERKELEY
Visiting Student of Computer Science   *Aug 2022 - Aug 2023*

XI'AN JIAOTONG UNIVERSITY
Bachelor of Computer Science;   *Sept 2020 - Jun 2025*

RESEARCH EMPLOYMENT

UNIVERSITY OF CALIFORNIA - BERKELEY
Research Intern   *Aug 2023 - Aug 2024*

PUBLICATIONS

- Chung Min Kim*, **Mingxuan Wu***, Justin Kerr*, Matthew Tancik, Ken Goldberg, & Angjoo Kanazawa. GARField: Group Anything with Radiance Fields. In *Conference on Computer Vision and Pattern Recognition (CVPR 2024)*. * Equal contribution.

- Justin Kerr*, Chung Min Kim*, **Mingxuan Wu**, Brent Yi, Qianqian Wang, Ken Goldberg, & Angjoo Kanazawa. Robot See Robot Do: Imitating Articulated Object Manipulation with Monocular 4D Reconstruction. In *8th Annual Conference on Robot Learning (CoRL 2024)*.

RESEARCH EXPERIENCE

Neural Deformable Parts
Research Assistant   *Jul 2024 - Present*
  - **Achievement**: Currently working on a feed-forward model to learn part motion distributions directly from long videos, aiming to improve dynamic comprehension and pose distribution modeling for articulated objects.
  - **Role and Collaboration**: Cooperating with Raven Huang, Chung Min Kim, Brent Yi and Justin Kerr, advised by Professor Ken Goldberg and Professor Angjoo Kanazawa.

Robot See Robot Do
Research Assistant   *Feb 2024 - Jul 2024*
  - **Achievement**: Developed 4D Differentiable Part Models (4D-DPM), an analysis-by-synthesis approach leveraging part-centric feature fields and geometric regularizers for reconstructing 3D motion from monocular videos, enabling applications like robotic trajectory replication.
  - **Role and Collaboration**: Teaming up with Justin Kerr, Chung Min Kim, Brent Yi and Qianqian Wang, guided by Professor Ken Goldberg and Professor Angjoo Kanazawa.

GARField
Research Assistant   *Apr 2023 - Feb 2024*
  - **Achievement**: Contributed to the development of a novel method called GARField utilizing multi-level masks to build a scale-conditioned affinity field for the 3d hierarchical grouping, which can be used for the 3d assets extraction.
  - **Role and Collaboration**: In collaboration with Chung Min Kim and Justin Kerr and Matthew Tancik, supervised by Professor Ken Goldberg and Professor Angjoo Kanazawa.

NeRFie-Talkie
Research Assistant   *Dec 2022 - Apr 2023*
  - **Achievement**: Developed NeRFie-Talkie, a novel approach that transfers scene representations from one NeRF scene to another using a CodeBook, with the success verified through an assessment of the transferability of information between NeRF models.
  - **Role and Collaboration**: Worked alongside Erich Liang on research projects, supervised by Professor Angjoo Kanazawa.

SKILLS

- **Programming Language**: PyTorch; PyTorch3D
- **Open-source Library**: Nerfstudio; Gsplat; Viser
- **3D Software**: Blender; Unity