Chuanruo Ning

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EDUCATION BACKGROUND

- **Peking University**, Beijing, China
  Bachelor of Science, Turing Class, Computer Science and Technology Sept 2020 - Present (expected Jun 2024)
  GPA: 3.85/4.00 (2022-2023) **3.79**/4.00 (2021-2022)
  Selected Honors and Awards:
  John Hopcroft Scholarship, 2022
  Peking University Dean's Scholarship, Peking University, 2022
  Freshman Scholarship, Peking University, 2020

MANUSCRIPTS

- **Learning Foresightful Dense Visual Affordance for Deformable Object Manipulation**
  Ruihai Wu*, **Chuanruo Ning***, Hao Dong (* denotes equal contribution)
  Under review of ICCV 2023

- **Where2Explore: Few-shot Affordance Learning for Unseen Novel Categories of Articulated Objects**
  Chuanruo Ning, Ruihai Wu, Haoran Lu, Kaichun Mo, Hao Dong
  Under review of NeurIPS 2023

- **Learning Environment-Aware Affordance for 3D Articulated Object Manipulation under Occlusion**
  Ruihai Wu*, Kai Cheng*, Yan Zhao, **Chuanruo Ning**, Guanqi Zhan, Hao Dong (* denotes equal contribution)
  Under review of NeurIPS 2023

RESEARCH EXPERIENCE

- Research Assistant, Center on Frontiers of Computing Studies, Peking University *2022.12 - Present*
  - **Few-shot Affordance Learning for Articulated Objects**, Supervisor: Dr. Kaichun Mo (NVIDIA), Prof. Hao Dong
  - Explore the cross-category few-shot learning task, where the model could effectively explores novel categories with minimal interactions on a limited number of instances.
  - Propose 'Similarity' to measure semantic similarity between local geometries across different categories.
  - Enable the model to perform few-shot learning on novel categories by discovering uncertain yet important areas.

- Research Assistant, Hyperplane Lab, Center on Frontiers of Computing Studies, Peking University *2022.1 - Present*
  - **Foresightful Deformable Object Manipulation**, Supervisor: Ph.D. Candidate Ruihai Wu, Prof. Hao Dong
  - Learn dense visual representations for deformable object manipulation, which reveals the dynamic and kinematic property of deformable objects.
  - Propose a novel training pipeline to take the future states after one manipulation step into consideration.
  - By training in a reversed step-by-step manner, we enable the representation to be aware of 'potential', thus finding the global optimal action.

SKILLS

- **Language**: Chinese: native English: proficient (TOEFL 110)
- **Deep Learning Frameworks**: PyTorch (Proficient), TensorFlow (Proficient)
- **Programming languages:** Python, C&C++