

YUNCHU ZHANG

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EDUCATION

University of Washington

Sep. 2023

Ph.D. in Computer Science & Engineering

Carnegie Mellon University

Aug. 2020 - Aug. 2022

M.S. in Robotics, School of Computer Science

GPA: 4.0 / 4.0

University of California, Los Angeles (UCLA)

Sept. 2017 - June. 2019

M.S. in Mechanical Engineering

GPA : 3.84 / 4.0

Dalian University of Technology (DUT)

Sept. 2013 - June. 2017

B.S. in Electrical & Electronics Engineering (Automation Major) Rank : 3/129 GPA : 3.81 / 4.0

PUBLICATIONS

(* indicates equal contribution)

Andrew Wagenmaker*, Mitsuhiro Nakamoto*, **Yunchu Zhang***, Seohong Park, Waleed Yagoub, Anusha Nagabandi, Abhishek Gupta, Sergey Levine. “Steering Your Diffusion Policy with Latent Space Reinforcement Learning”, **Conference on Robot Learning (CoRL), 2025.**

Yunchu Zhang, Shubham Mittal, Zhengyu Zhang, Liyiming Ke, Siddhartha Srinivasa, Abhishek Gupta. “ATK: Automatic Task-driven Keypoint Selection for Robust Policy Learning”, **Conference on Robot Learning (CoRL), 2025.**

Alexander Khazatsky*, Karl Pertsch*, ..., Yunchu Zhang, ..., Sergey Levine, Chelsea Finn. “DROID: A Large-Scale In-The-Wild Robot Manipulation Dataset”, **Robotics: Science and Systems (RSS), 2024.**

Liyiming Ke*, **Yunchu Zhang***, Abhay Deshpande, Abhishek Gupta, Siddhartha Srinivasa. “CCIL: Continuity-based Data Augmentation for Corrective Imitation Learning”, **International Conference on Learning Representations (ICLR), 2024.**

Yunchu Zhang*, Liyiming Ke*, Abhay Deshpande, Abhishek Gupta, Siddhartha Srinivasa. “Cherry-Picking with Reinforcement Learning” **Robotics: Science and Systems (RSS), 2023.**

Nikolaos Gkanatsios*, Ayush Jain*, Zhou Xian, **Yunchu Zhang**, Christopher G. Atkeson, Katerina Fragkiadaki. “Energy-based Models are Zero-Shot Planners for Compositional Scene Rearrangement”, **Robotics: Science and Systems (RSS), 2023.**

Xingyu Lin*, Carl Qi*, **Yunchu Zhang**, Zhiao Huang, Katerina Fragkiadaki, Yunzhu Li, Chuang Gan, David Held. “Planning with Spatial-Temporal Abstraction from Point Clouds for Deformable Object Manipulation”, **Conference on Robot Learning (CoRL), 2022.**

Jingyun Yang*, Hsiao-Yu Fish Tung*, **Yunchu Zhang***, Gaurav Pathak, Ashwini Pople, Christopher G. Atkeson, Katerina Fragkiadaki. “Visually-Grounded Library of Behaviors for Manipulating Diverse Objects across Diverse Configurations and View”, **Conference on Robot Learning (CoRL), 2021.**

RESEARCH EXPERIENCE

University of Washington

Seattle, WA

Advisors: **Siddhartha Srinivasa, Abhishek Gupta**

2023

- Developed a system, CherryBot, for training deep RL agents for dynamic fine manipulation without rigid surface support on chopsticks robot.

- Proposed a new technique to enhance the robustness of imitation learning methods by generating corrective data to account for compounding errors and disturbances.
- Developed a distillation-based algorithm to select minimal set of task-relevant keypoints that can predict optimal behavior, enabling zero-shot robust sim-to-real policy transfer

Carnegie Mellon University

Advisors: **Christopher G. Atkeson** , **Katerina Fragkiadaki**

Jan.2021-Aug.2022

Pittsburgh, PA

Nov. 2019-Aug. 2020;

- Built a hierarchical architecture which utilizes learned view-invariant, affordance aware representations to select the behaviors that can successfully perform tasks across various objects, camera views.
- Proposed a model that maps spatial rearrangement instructions to goal scene configurations via gradient descent on a set of energy functions; Utilized low-level vision-based policies for instruction following.
- Proposed a framework that PLAns with Spatial and Temporal Abstraction (PASTA) to solve the challenging sequential deformable object manipulation task.

University of California, Los Angeles

Course Project Advisor: **Veronica Santos**

Los Angeles, CA

April 2018 - June 2018

- Developed a system that can detect randomly shuffled Rubik's cube's pattern and generate the optimal motion solution; Utilized Inverse Kinematics, hybrid control to execute the motion solution plan.

AWARDS

Freescale Smartcar Competition, Regional Second Prize	2015
Electronic Design Competition, Nationwide Second Prize (control a special wind pendulum)	2015
Scholarship for Outstanding Merits (DUT)	2014, 2015, 2016
Endress+Hauser Scholarship for Outstanding Student	2015

SKILLS

Programming skills: Python, C++, MATLAB, Julia, Embedded system programming
 Framework / Libraries: ROS, PyTorch, Tensorflow, OpenCV, Mujoco, Pybullet
 Hardware skills: PCB circuit design, CAD design, mechatronics system design and manufacturing