

# Yilin Wu

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## EDUCATION

### Stanford University

Sept. 2021 -

- M.S. in Computer Science

### Shanghai Jiao Tong University

Sept. 2016 - Jun. 2020

- B.S. in Information Security
- Accumulative GPA: **91.89/100** Rank: **1/104**

### University of California, Berkeley

Jan. - May. 2019

- International Exchange student in Spring Semester
- Major GPA: **4.0/4.0** Accumulative GPA: **4.0/4.0**

## PUBLICATION

Yunfei Li, **Yilin Wu**, Huazhe Xu, Xiaolong Wang, Yi Wu, “Solving Compositional Reinforcement Learning Problems via Task Reduction”, *The International Conference on Learning Representations (ICLR)*, May. 2021 [PDF] [Website]

**Yilin Wu\***, Wilson Yan\*, Thanard Kurutach, Lerrel Pinto, Pieter Abbeel, “Learning to Manipulate Deformable Objects without Demonstrations”, *Robotics: Science and Systems (RSS)*, July. 2020 [PDF] [Website]

## RESEARCH EXPERIENCE

### Shanghai Qi Zhi Institute

Sept. 2020 - June. 2021

Research Assistant supervised by [Prof. Yi Wu](#)

#### Solving Compositional Reinforcement Learning Problems via Task Reduction

- Tackled compositional hard-to-solve tasks by applying self-imitation and task-reduction in reinforcement learning
- Accelerated the learning on a variety of challenging sparse-reward continuous control problems, e.g., stacking, navigation
- Demonstrated the high efficiency of our learning paradigm on both state and visual observations

### Berkeley Artificial Intelligence Research Lab, UC Berkeley

May. 2019 - Sept. 2019

Research Assistant supervised by [Prof. Pieter Abbeel](#)

#### Learning to Manipulate Deformable Objects without Demonstrations

- Proposed a novel learning framework for picking based on the maximal value of placing
- Displayed the conditional action space formulation with significant acceleration
- Built the cloth and rope simulation and showed the transfer to real-robot cloth and rope manipulation
- Became the first to train RL from scratch for deformable object manipulation and demonstrated it on the real robot

### Apex Lab, Computer Vision Group, SJTU

Apr. 2018- Jan. 2019

Research Assistant supervised by [Prof. Yong Yu](#) and [Prof. Weinan Zhang](#)

#### Improving upon VAE-related Models

- Gained in-depth understanding of generative models, especially Variational Autoencoder (VAE) and its variants
- Summarized previous works on Adversarial Autoencoder (AAE), Wasserstein Autoencoder (WAE), etc
- Tried with more universal posteriors instead of the deterministic posterior or Gaussian posterior
- Gave a brief talk on VAE-related models in the Apex Lab, including the analysis of VAE variants

## SELECTED COURSE PROJECTS

### An End-to-End Encrypted File Sharing System [PDF] [Code]

Mar. 2019

CS161 Computer Security

UC Berkeley

- Designed a file sharing system (e.g. Dropbox) that protects user privacy and adds defenses to possible attacks using the knowledge of cryptography learned in class
- Self-learned and mastered a new programming language Go for the project
- Wrote a report summarizing the design and functions of the system and clarified the defense against potential major attacks in the system

## SELECTED SCHOLARSHIP & HONORS

Graduated with honor: *Outstanding Graduate of Shanghai*

2020

Hongyi Scholarship (*Top 10 Summer Research among Undergraduates*)

2019

National Scholarship (<1%)  
Academic Excellence Scholarship(Second-Class) of SJTU

2017  
2017,2018

## MISCELLANEOUS

**Standard Test:** TOEFL 115 (*Reading 30, Listening 29, Speaking 26, Writing 30*); GRE 327+4.5 (*Verbal 157, Quantitative 170*)

**Programming Skills:** C/C++, Python, Tensorflow, Pytorch, Git, L<sup>A</sup>T<sub>E</sub>X

**Robotic tools:** ROS, Pybullet, Mujoco

**Robots used:** PR2, Xarm7

**Hobbies:** Swimming, Hiking, Traveling