

# YUNSHUANG LI

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## Education

University of Pennsylvania, M.S. in Robotics	09/2022 – present
Department of Computer and Information Science, Advisor: Dinesh Jayaraman	GPA: 4.00/4.00
Zhejiang University, B.S. in Automatic Control	09/2018 – 06/2022
Chu Kochen Honors College, Dual degree in Mechanical Engineering	Major GPA: 3.98/4.00

## Publication

- Universal Visual Decomposer : Long-Horizon Manipulation Made Easy**  
Zichen Zhang\*, Yunshuang Li\*, Osbert Bastani, Abhishek Gupta, Dinesh Jayaraman, Yecheng Jason Ma†, Luca Weihs†  
CoRL LEAP workshop (oral), 2023; in Submission, ICRA 2023. [Website]
- Vision-Based Contact Localization Without Touch or Force Sensing**  
Leon Kim, Yunshuang Li, Michael Posa, Dinesh Jayaraman  
7th Annual Conference on Robot Learning (CoRL), 2023 [PDF] [Website]
- PEg TRAnsfer Workflow recognition challenge report: Does multi-modal data improve recognition?**  
Arnaud Huaultmé, Kanako Harada, (et al., including Yunshuang Li)  
Computer Methods and Programs in Biomedicine, 2023 [PDF]
- Control of Pneumatic Artificial Muscles with SNN-based Cerebellar-like Model**  
Hongbo Zhang\*, Yunshuang Li\*, Yipin Guo\*, Xinyi Chen, Qinyuan Ren  
International Conference on Social Robotics (ICSR), 2021 [PDF]
- Collaborative Recognition of Feasible Region with Aerial and Ground Robots through DPCN**  
Yunshuang Li, Zheyuan Huang, Zexi Chen, Yue Wang, Rong Xiong  
IEEE International Conference on Real-time Computing and Robotics (RCAR), 2021 [PDF]

## Projects

<b>Tag-assisted Manipulation Using Predictive Model</b>	07/2023-present
Utilized wireless sensors to enable precise localization of a high frame rate tag, helping agile manipulation tasks.	
<b>Navigation Recovery RL: Safe Navigation Using Learned Recovery Zones</b>	03/2023-05/2023
Investigated Recovery RL that can leverage offline data of constraint violations to learn about constraints before interacting with the environment.	
<b>Image Translation Toward Multimodality</b>	12/2022
Proposed a novel module based on BicycleGAN to handle with multimodal image translation problem.	
<b>MBTI Personality Trait Classification Using Textual Data</b>	12/2022
Tackled the complex problem of personality trait classification given a combination of textual data.	
<b>3D Scene Reconstruction For Lung Bronchoscopic Surgical Robots</b>	03/2022-07/2022
Senior Thesis: Developed a pipeline that processes raw sequential data from image-guided bronchoscopy, reconstructing the 3D lung structure.	

## Awards

CoRL 2023 Travel Grant	2023
GAPSA Career Services Summer Funding at University of Pennsylvania	2023
Chiang Chen Oversea Graduate Scholarship	2022
National Scholarship issued by Ministry of Education of the People's Republic of China	2021
Champion of International Robotic Workflow Recognition Challenge in MICCAI 2021	2021
Gold medal in the Internet+ Innovation and Entrepreneurship Competition	2020
Gold medal in the National Challenge Cup Competition	2020

## Service

Reviewer for NeurIPS FMDM workshop	2023
Teaching Assistant for CIS 5200 - Machine Learning	Fall 2023
Teaching Assistant for MEAM 5200 - Introduction to Robotics	Spring 2023

## Industry Experience

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Research Scientist Intern, Research Institute of HIKVISION	Summer 2022
Research Scientist Intern, 2012 Lab, HUAWEI Co. Ltd	Summer 2019

## Miscellaneous Experience

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Board Member of Penn Chinese Dance Club	2023
Volunteer for 5th Annual Learning for Dynamics & Control Conference (L4DC)	June 2023
Instructor of Python Club at Carver Engineering and Science High School, Philadelphia	Spring 2023
Volunteer for GRASP ROBO Master's Student Open House	March 2023
Volunteer Instructor for a Rural High School, Yunnan, China	Summer 2020

## Technical Skills

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**Languages:** Python, ROS, MATLAB, C, C++, HTML/CSS, L<sup>A</sup>T<sub>E</sub>X

**Developer Tools:** VS Code, Anaconda, Docker

**Technologies/Frameworks:** Linux, PyTorch, Tensorflow, AutoCAD, Solidworks, GitHub