

Mohit Shridhar

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RESEARCH INTERESTS Language Grounding, Task and Motion Planning, Human-Robot Interaction, Unsupervised and Self-Supervised Representation-Learning

EDUCATION **University of Washington** 2018 - Present
PhD Student in Computer Science
Advised by: Dieter Fox

University of Washington 2018 - 2020
Masters in Computer Science

National University of Singapore 2012 - 2016
B.Eng in Computer Engineering, Minor in Techno-Entrepreneurship
Honors with Distinction
Advised by: David Hsu

Stanford 2015 - 2015
NUS Overseas College - one year program

PUBLICATIONS Google Scholar, Semantic Scholar.

Conferences

- (C6) **CLIPort: What and Where Pathways for Robotic Manipulation**
Conference on Robot Learning (CoRL) 2021
Mohit Shridhar, Lucas Manuelli, Dieter Fox
- (C5) **Language Grounding with 3D Objects**
Conference on Robot Learning (CoRL) 2021
Jesse Thomason*, Mohit Shridhar*, Yonatan Bisk,
Chris Paxton, Luke Zettlemoyer
- (C4) **ALFWorld: Aligning Text and Embodied Environments for Interactive Learning**
International Conference on Learning Representations (ICLR) 2021
Mohit Shridhar, Xingdi Yuan, Marc-Alexandre Côté,
Yonatan Bisk, Adam Trischler, Matthew Hausknecht
- (C3) **ALFRED: A Benchmark for Interpreting Grounded Instructions for Everyday Tasks.**
Computer Vision and Pattern Recognition (CVPR) 2020
Mohit Shridhar, Jesse Thomason, Daniel Gordon, Yonatan Bisk
Winson Han, Roozbeh Mottaghi, Luke Zettlemoyer, Dieter Fox
- (C2) **Interactive Visual Grounding of Referring Expressions for Human-Robot Interaction.**
Robotics: Science and Systems (RSS) 2018
Mohit Shridhar, David Hsu
- (C1) **XPose: Reinventing user interaction with flying cameras.**
Robotics: Science and Systems (RSS) 2017
Ziquan Lan, Mohit Shridhar, David Hsu, Shengdong Zhao
🏆 Best Systems Paper Award

Journals

- (J1) **INGRESS: Interactive Visual Grounding of Referring Expressions.**
International Journal of Robotics Research (IJRR) 2020
Mohit Shridhar, Dixant Mittal, David Hsu

Workshops

- (W1) **Grounding Spatio-Semantic Referring Expressions for Human-Robot Interaction.**
RSS Workshop on Spatial-Semantic Representations in Robotics 2017
Mohit Shridhar, David Hsu

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| EXPERIENCE | NVIDIA: Research Intern (Part-time) Robotics Lab – Seattle Advised by Prof. Dieter Fox | Mar 2021 - Present |
| | Microsoft Research: Intern Reinforcement Learning Group – Seattle Advised by Dr. Matthew Hausknecht | June 2020 - Sept 2020 |
| | NVIDIA: Research Intern Robotics Lab – Seattle Advised by Prof. Dieter Fox | Jan 2020 - May 2020 |
| | M²AP Lab: Research Assistant Advised by Prof. David Hsu | Jan 2016 - Aug 2018 |
| | Meta Co: Computer Vision and Graphics Intern YCombinator’13 Augmented-Reality Headset Startup | Jan 2015 - Dec 2015 |
| | <ul style="list-style-type: none">• Worked on low-latency visual-inertial SLAM: feature tracking, sensor calibration, IMU integration.• Built a 3D-Skype system with real-time reconstruction, and human-pose tracking based collaborative interface.• Part of CEO’s ensemble for building investor demos during Series B (\$50M round). | |
| | Hope Technik: Robotics Intern Medical Transport AGV Platform | May 2014 - Aug 2014 |
| <ul style="list-style-type: none">• Worked on path-planning and obstacle avoidance for autonomous medical transport in hospitals.• Implemented a multi-map manager to allow a swarm of robots to navigate across various floors.• Developed an OculusRift based demonstration tool to showcase the AGV in simulated working conditions. | | |
| PROJECTS | Free Viewpoint 3D Telepresence System A realtime, volumetric video conferencing system using commodity RGB-D cameras. | 2013 - 2016 |
| | Monocular Visual-SLAM for Mobile Platforms A keyframe-based 6DOF visual tracker for Android platforms. | 2015 |
| | Dense-Semantic Mapping Combined dense image-captioning with visual-SLAM for object search. | 2017 |

SERVICES Reviewer for CoRL, RSS, T-HRI, RA-L, IJCAI, ACL, SIGGRAPH, ICCV, CVPR.

ORGANIZER Co-Organizer: Embodied Vision, Actions & Language Workshop (EVAL) at ECCV-20
Co-Organizer: ALFRED Challenge @ Embodied AI Workshop at CVPR-21

AWARDS & HONORS NVIDIA Graduate Fellowship (2022)
Paul G. Allen Fellowship (2018), University of Washington
Best Systems Paper Award in Memory of Seth Teller (2017), RSS
NUS 30th Annual Faculty Innovation and Research Award (2016), Undergrad Thesis
NUS Overseas College Scholarship (2015), Exchange Program at Stanford
ASEANpreneurs Autodesk Design Challenge (2014), First Place

TECHNICAL SKILLS **Languages:** Python (most familiar), C++
Frameworks: PyTorch, OpenCV, ROS, Unity3D

INVITED TALKS CAIR Lab @ Columbia (Jan 2022)
Language & Intelligence Group @ MIT (Dec 2021)
Robotics Group @ Brown (Oct 2021)
RAIVN Lab @ UW (Sept 2021)
AdaComp Lab @ NUS (Oct 2021)