ZEYU ZHANG

Homepage: zeyuzhang.com   **Email**: zeyuzhang@ucla.edu
GitHub: TooSchoolForCool   **Phone**: +86 13220173213

EDUCATION

University of California, Los Angeles
Advisor: Prof. Song-Chun Zhu
Ph.D. in Computer Science | GPA: 4.00/4.00 | Sep. 2019 - Dec. 2022

University of California, Los Angeles
M.S. in Computer Science | GPA: 4.00/4.00 | Sep. 2017 - Jun. 2019

Arizona State University
Exchange Student | GPA: 4.00/4.00 | Sep. 2015 - Jun. 2016

Hunan University
B.S. in Computer Science | GPA: 4.29/4.50 | Rank 1/107 | Sep. 2013 - Jul. 2017

EXPERIENCE

Beijing Institute for General Artificial Intelligence
Research Scientist
Apr. 2023 - present

- Developed perception models for robot manipulation in unstructured environments.
- Built learning systems for dexterous robot manipulation skills.
- Led a team in building a simulation platform for humanoid robot locomotion and manipulation with high-fidelity dynamics in large-scale environment.

Center for Vision, Cognition, Learning and Autonomy, UCLA
Graduate Student Researcher
Advisor: Prof. Song-Chun Zhu   *Jun. 2018 - May. 2021*

- ONR N00014-19-1-2153: Scene Understanding for Robot Autonomy
- DURIP N00014-20-1-2812: A Cognitive Robot Platform for Scene Understanding and Expeditionary Maneuver
- ONR MURI N00014-16-1-2007: Understanding Scenes and Events through Joint Parsing, Cognitive Reasoning and Lifelong Learning
- DARPA XAI N66001-17-2-4029: Learning and Communicating Explainable Representations for Analytics and Autonomy

DMAI, Inc., Los Angeles, CA
Robotic Research Intern
Supervisor: Dr. Yixin Zhu, Dr. Hangxin Liu   *Sep. 2018 - Mar. 2020*

- Developed a tabletop companion robot system that reads, understands, and answers questions about books through natural user interaction.

PREPRINT

* denotes joint first authors
† denotes (joint) corresponding authors

[1] **Zeyu Zhang**, Ziyuan Jiao[†]
IKDiffuser: A Generative Inverse Kinematics Solver for Multi-arm Robots via Diffusion Model
under review

JOURNAL PUBLICATION

* denotes joint first authors
† denotes (joint) corresponding authors

[1] Fan Wu*, Ziyuan Jiao*[†], Wanlin Li*[†], **Zeyu Zhang***, Hang Li, Jiahao Wu, Baoxiong Jia, Shaopeng Dong
A VR-Based Robotic Teleoperation System With Haptic Feedback and Adaptive Collision Avoidance
IEEE Transactions on Consumer Electronics (TCE), 2025

[2] **Zeyu Zhang***, Sixu Yan*, Muzhi Han, Zaijin Wang, Xinggang Wang, Song-Chun Zhu, Hangxin Liu[†]
M3Bench: Benchmarking Whole-body Motion Generation for Mobile Manipulation in 3D Scenes
IEEE Robotics and Automation Letters (RA-L), 2025

[3] Sixu Yan, **Zeyu Zhang**, Muzhi Han, Zaijin Wang, Qi Xie, Zhitian Li, Zhehan Li, Hangxin Liu[†], Xinggang Wang[†], Song-Chun Zhu
M2diffuser: Diffusion-based trajectory optimization for mobile manipulation in 3d scenes
IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2025

[4] Hangxin Liu, Qi Xie, **Zeyu Zhang**, Tao Yuan, Song Wang, Zaijin Wang, Xiaokun Leng, Lining Sun, Song-Chun Zhu, Jingwen Zhang[†], Zhicheng He[†], Yao Su[†]
PR2: A Physics- and Photo-realistic Humanoid Testbed with Pilot Study in Competition
Journal of Field Robotics, 2025

[5] Zhenliang Zhang[†], **Zeyu Zhang**, Ziyuan Jiao, Yao Su, Hangxin Liu, Wei Wang and Song-Chun Zhu[†]
On the Emergence of Symmetrical Reality
IEEE Conference on Virtual Reality and 3D User Interfaces (VR) , 2024

[6] Hangxin Liu*[†], **Zeyu Zhang***, Ziyuan Jiao*, Zhenliang Zhang, Minchen Li, Chenfanfu Jiang, Yixin Zhu[†], Song-Chun Zhu
A Reconfigurable Data Glove for Reconstructing Physical and Virtual Grasps
Engineering, 2023

[7] Muzhi Han*, **Zeyu Zhang***, Ziyuan Jiao, Xu Xie, Yixin Zhu[†], Hangxin Liu[†], Song-Chun Zhu
Scene Reconstruction with Functional Objects for Robot Autonomy
International Journal of Computer Vision (IJCV), 2022

[8] **Zeyu Zhang***, Ziyuan Jiao*, Weiqi Wang, Yixin Zhu, Song-Chun Zhu, Hangxin Liu[†]
Understanding Physical Effects for Effective Tool-use
IEEE Robotics and Automation Letters (RA-L+IROS), 2022

CONFERENCE PUBLICATION

* denotes joint first authors
† denotes (joint) corresponding authors

[1] Peiyuan Zhi*, Zhiyuan Zhang*, Yu Zhao, Muzhi Han, **Zeyu Zhang**, Zhitian Li, Ziyuan Jiao, Baoxiong Jia[†], Siyuan Huang[†]
Closed-Loop Open-Vocabulary Mobile Manipulation with GPT-4V
IEEE International Conference on Robotics and Automation (ICRA), 2025

[2] Shu Wang*, Muzhi Han*, Ziyuan Jiao*[†], **Zeyu Zhang**, Ying Nian Wu, Song-Chun Zhu, Hangxin Liu[†]
LLM^3: Large Language Model-based Task and Motion Planning with Motion Failure Reasoning
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2024

[3] Yao Su, Ziyuan Jiao, **Zeyu Zhang**, Jingwen Zhang, Hang Li, Meng Wang, Hangxin Liu[†]
Flight Structure Optimization of Modular Reconfigurable UAVs
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2024

[4] Bo Dai, Linge Wang, Baoxiong Jia, **Zeyu Zhang**, Song-Chun Zhu, Chi Zhang[†], Yixin Zhu[†]
X-VoE: Measuring eXplanatory Violation of Expectation in Physical Events
In Proceedings of the International Conference on Computer Vision (ICCV), 2023

[5] **Zeyu Zhang***, Muzhi Han*, Baoxiong Jia, Ziyuan Jiao, Yixin Zhu, Song-Chun Zhu, Hangxin Liu[†]
Learning a Causal Transition Model for Object Cutting
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2023

[6] **Zeyu Zhang***, Lexing Zhang*, Zaijin Wang, Muzhi Han*, Ziyuan Jiao, Yixin Zhu, Song-Chun Zhu, Hangxin Liu[†]
Part-level Scene Reconstruction Affords Robot Interaction
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2023

[7] Ziyuan Jiao, Yida Niu, **Zeyu Zhang**, Song-Chun Zhu, Yixin Zhu, Hangxin Liu[†]
Sequential Manipulation Planning on Scene Graph
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2022

[8] Ziyuan Jiao*, **Zeyu Zhang***, Xin Jiang, David Han, Yixin Zhu, Hangxin Liu, Song-Chun Zhu
A Virtual Kinematic Chain Perspective for Manipulations in Household Environments
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2021

[9] Ziyuan Jiao*, **Zeyu Zhang***, Weiqi Wang, David Han, Yixin Zhu, Hangxin Liu, Song-Chun Zhu
Efficient Task Planning for Mobile Manipulation:a Virtual Kinematic Chain Perspective
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2021

[10] Muzhi Han*, **Zeyu Zhang***, Ziyuan Jiao, Xu Xie, Yixin Zhu, Hangxin Liu, Song-Chun Zhu
Reconstructing Functionally Equivalent and Interactive 3D Scenes via Panoptic Mapping and Physical Common Sense
IEEE International Conference on Robotics and Automation (ICRA), 2021

[11] Shuwen Qiu*, Hangxin Liu*, **Zeyu Zhang**, Yixin Zhu, Song-Chun Zhu
Human-Robot Interaction in a Shared Augmented Reality Workspace
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2020

[12] **Zeyu Zhang**, Hangxin Liu[†], Ziyuan Jiao, Yixin Zhu, and Song-Chun Zhu
Congestion-aware Evacuation Routing using Augmented Reality Devices
IEEE International Conference on Robotics and Automation (ICRA), 2020

[13] Hangxin Liu*, **Zeyu Zhang***, Yixin Zhu, and Song-Chun Zhu
Self-Supervised Incremental Learning for Sound Source Localization in Complex Indoor Environment
International Conference on Robotics and Automation (ICRA), 2019

PROFESSIONAL SERVICE	**Journal reviewer:** Nature Machine Intelligence, IJCV, IEEE T-RO, IEEE RA-L **Conference reviewer:** ICRA, IROS, NeurIPS, ICML, AAAI, ICCV
SKILLS	**Tools/Framework:** C++/C, Python, Shell, Git, ROS, OpenCV, PyTorch **Operating System:** Linux (Ubuntu/Arch/Raspbian/Orin), Mac OS

AWARDS		
Two Dean's List Certificates, Arizona State University (2016 Spring)	*2015*	*2016*
Chinese Government Scholarship, Chinese Scholarship Council		*Jul. 2015*
National Scholarship, the Ministry of Education of the P.R.China		*Oct. 2015*
National Scholarship, the Ministry of Education of the P.R.China		*Oct. 2014*