

Jason Xinyu Liu

🏠 jasonxyliu.github.io
✉ xinyu_liu@brown.edu

Education

- 2018 – **Brown University**
Ph.D. in Computer Science
Advisor: Stefanie Tellex
- 2021 **Brown University**
M.S. in Computer Science
Advisor: Stefanie Tellex
- 2017 **University of California, Berkeley**
B.S. in Electrical Engineering and Computer Sciences
Advisor: Ken Goldberg and David Wagner

Conference Publications

- IJCAI 2024 **A Survey of Robotic Language Grounding: Tradeoffs between Symbols and Embeddings**
V. Cohen*, **J.X. Liu***, R. Mooney*, S. Tellex*, D. Watkins*
International Joint Conference on Artificial Intelligence (IJCAI) 2024 Survey Track. [PDF]
- ICRA 2024 **LTL-Transfer: Skill Transfer for Temporally-Extended Task Specifications**
J.X. Liu*, A. Shah*, E. Rosen, M. Jia, G.D. Konidaris, S. Tellex
IEEE International Conference on Robotics and Automation (ICRA) 2024. [PDF, Website]
- CoRL 2023 **Grounding Complex Natural Language Commands for Temporal Tasks in Unseen Environments**
J.X. Liu*, Z. Yang*, I. Idrees, S. Liang, B. Schornstein, S. Tellex, A. Shah
Conference on Robot Learning (CoRL) 2023. [PDF, Website]
- INTERSPEECH 2023 **Style-transfer based Speech and Audio-visual Scene Understanding for Robot Action Sequence Acquisition from Videos**
C. Hori, P. Peng, D. Harwath, **J.X. Liu***, K. Ota, S. Jain, R. Corcodel, D. Jha, D. Romeres, J. Le Roux
INTERSPEECH 2023. [PDF]
- ICRA 2022 **Generalizing to New Domains by Mapping Natural Language to Lifted LTL**
E. Hsiung, H. Mehta, J. Chu, **J.X. Liu**, R. Patel, S. Tellex, G. D. Konidaris
IEEE International Conference on Robotics and Automation (ICRA) 2022. [PDF]

- ACNS 2020 **Minority Reports Defense: Defending Against Adversarial Patches**
M. McCoyd, W. Park, S. Chen, N. Shah, R. Roggenkemper, M. Hwang, **J.X. Liu**,
D. Wagner
Applied Cryptography and Network Security Workshops 2020. [PDF]
- ICRA 2018 **Dex-Net 3.0: Computing Robust Vacuum Suction Grasp Targets in Point Clouds Using a New Analytic Model and Deep Learning**
J. Mahler, M. Matl, **J.X. Liu**, A. Li, D. Gealy, K. Goldberg
IEEE International Conference on Robotics and Automation (ICRA) 2018. [PDF, Website]
- ICISS 2018 **Detecting Phone Theft Using Machine Learning**
J.X. Liu, D. Wagner, S. Egelman
International Conference on Information Science and System 2018. [PDF]
- RSS 2017 **Dex-Net 2.0: Deep Learning to Plan Robust Grasps with Synthetic Point Clouds and Analytic Grasp Metrics**
J. Mahler, J. Liang, S. Niyaz, M. Laskey, R. Doan, **JX Liu**, J. A. Ojea, K. Goldberg
Robotics: Science and Systems (RSS) 2017. [PDF, Website]

Workshop Publications

- AAAI-FSS 2023 **Grounding Complex Natural Language Commands for Temporal Tasks in Unseen Environments**
J.X. Liu, Z. Yang, I. Idrees, S. Liang, B. Schornstein, S. Tellex, A. Shah
AAAI Fall Symposium on Unifying Representations for Robot Application Development (UR-RAD) 2023. **Best Paper Nominee**. [PDF, Website]
- IJCAI-W 2022 **LTL-Transfer: Skill Transfer for Temporally-Extended Task Specifications**
J.X. Liu*, A. Shah*, E. Rosen, M. Jia, G.D. Konidaris, S. Tellex
IJCAI Workshop on Generalization in Planning 2022. [PDF, Slides]
- RSS-W 2021 **Leveraging Temporal Structure in Safety-Critical Task Specifications for POMDP Planning**
X. Liu, E. Rosen, S. Zheng, G. D. Konidaris, S. Tellex
Robotics: Science and Systems (RSS) Workshop Robotics for People 2021. [PDF, Poster]
- RSS-W 2021 **Dialogue Object Search**
M. Roy*, K. Zheng*, X. Liu, S. Tellex
Robotics: Science and Systems (RSS) Workshop Robotics for People 2021. [PDF]

Workshop Organization

- RSS 2024 Workshop on Task Specification for General-Purpose Intelligent Robots. [Website]

Professional Experience

- Summer 2022 **Research Intern**, *Mitsubishi Electric Research Laboratories*, Cambridge, MA
- Summer 2015 **Software Engineer**, *NetSuite*, San Mateo, CA

Fellowships, Awards and Honors

- Brown **National Science Foundation Graduate Research Fellowship Program**, 2018
 Jack Kent Cooke Foundation Graduate Scholarship, 2018
- UC Berkeley **Tau Beta Pi, National Engineering Honor Society**, 2014
 Eta Kappa Nu, National EECS Honor Society, 2014
 Jack Kent Cooke Foundation Undergraduate Transfer Scholarship, 2014

Research Mentorship

- Spring 2024 - Ivy He (Brown Ph.D.)
 Fall 2023 - Yichen Wei (Brown Master's)
 Fall 2023 - Ahmed Jaafar (Brown Research Intern)
- Summer 2023 Anneke Wernerfelt (Haverford Undergraduate. Now UPenn Master's)
- Summer 2023 Sofia Juliani (Rutgers Undergraduate)
 Spring 2021 Shihab Khalfalla (UConn Undergraduate. Now at Microsoft)
- Summer 2020 Suchen Zheng (Brown Master's. Now Yale Ph.D.)
 - Fall 2021
- Summer 2020 Tyler Edwards (UPenn Undergraduate. Now UPenn Master's)
 - Fall 2021

Service

- Brown **First-year Ph.D. student mentor**, 2021-2023
 Google exploreCSR (explorecsr.cs.brown.edu), Spring 2021