

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

Publications

- IROS 2024 **Lang2LTL-2: Grounding Spatiotemporal Navigation Commands Using Large Language and Vision-Language Models**
J.X. Liu, A. Shah, G. Konidaris, S. Tellex, and D. Paulius
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2024.
[website]
- 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 (ACNS) 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 (ICISS) 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, **J.X. 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 Develop-
ment (UR-RAD) 2023*. **Best Paper Finalist**. [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**
J.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*, **J.X. Liu**, S. Tellex
Robotics: Science and Systems (RSS) Workshop Robotics for People 2021. [PDF]

Invited Talks

- October 2024 **CU Boulder, CS Department Seminar**
(upcoming)

August 2024 **Arizona State, CS Department Seminar**
(upcoming)
July 2024 **Oxford, CS Department Seminar**
October 2022 **Northeast Robotics Colloquium**

Workshop Organization

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

Industry 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

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 Master's at UPenn)
Summer 2023 Sofia Juliani (Rutgers Undergraduate)
Spring 2021 Shihab Khalfalla (UConn Undergraduate. Now at Microsoft)
Summer 2020 Suchen Zheng (Brown Master's. Now Ph.D. at Yale)
- Fall 2021
Summer 2020 Tyler Edwards (UPenn Undergraduate. Now Master's at UPenn)
- Fall 2021

Service

Brown **First-year Ph.D. student mentor**, 2021-2023
Google exploreCSR (explorecsr.cs.brown.edu), Spring 2021
Review **RSS-W 2024, IROS 2024, ICRA 2023, ICRA 2022**