Xinyu (Jason) Liu

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Education

2018 – 2023 **Ph.D. in Computer Science**, *Brown University*, Providence, RI.

Advisor: Stefanie Tellex.
Research: Reinforcement Learning, Robotics, Natural Language Processing, Computer Vision.

2021 **M.S. in Computer Science**, *Brown University*, Providence, RI.

Advisor: Stefanie Tellex.

2017 **B.S. in Electrical Engineering and Computer Sciences**, *University of California, Berkeley*, Berkeley, CA.

Advisor: Ken Goldberg, David Wagner.
Research: Robotic Grasping, Deep Learning Security, ML for Mobile Security.

Publications

ICRA 2022 *Leveraging Temporal Structure in Task Specifications for POMDP Planning.*
Xinyu Liu, Eric Rosen, Suchen Zheng, Tyler Edward, Ankit Shah, George Konidaris, Stefanie Tellex.
Under Review. IEEE International Conference on Robotics and Automation 2022.

RSS-W 2021 *Leveraging Temporal Structure in Safety-Critical Task Specifications for POMDP Planning.*
Xinyu Liu, Eric Rosen, Suchen Zheng, George Konidaris, Stefanie Tellex.
Robotics: Science and Systems 2021 Workshop Robotics for People.

ACNS 2020 *Minority Reports Defense: Defending Against Adversarial Patches.*
Michael McCoyd, Won Park, Steven Chen, Neil Shah, Ryan Roggenkemper, Minjune Hwang, Xinyu Liu, David Wagner.
Applied Cryptography and Network Security Workshops 2020.

2019 *Specificity-Controlled Video Captioning.*
Xinyu Liu, Ellie Pavlick, Daniel Ritchie, George Konidaris, Stefanie Tellex.
Technical Report 2019.

ICRA 2018 *Dex-Net 3.0: Computing Robust Vacuum Suction Grasp Targets in Point Clouds Using a New Analytic Model and Deep Learning.*
Jeffrey Mahler, Matthew Matl, Xinyu Liu, Albert Li, David Gealy, Ken Goldberg.
IEEE International Conference on Robotics and Automation 2018.

ICISS 2018 *Detecting Phone Theft Using Machine Learning.*
Xinyu Liu, Serge Egelman, David Wagner.
International Conference on Information Science and System 2018.

RSS 2017 *Dex-Net 2.0: Deep Learning to Plan Robust Grasps with Synthetic Point Clouds and Analytic Grasp Metrics.*
Jeffrey Mahler, Jacky Liang, Sherdil Niyaz, Michael Laskey, Richard Doan, Xinyu Liu, Juan Aparicio Ojea, Ken Goldberg.
Robotics: Science and Systems 2017.

Professional Experience

2018-present **Graduate Student Researcher**, *Brown University*, Providence, RI, Advised by Stefanie Tellex, George Konidaris.

2016-2018 **Undergraduate Research Assistant**, *University of California, Berkeley*, Berkeley, CA, Advised by Ken Goldberg, David Wagner.

Summer 2015 **Software Engineer**, *NetSuite*, San Mateo, CA.

Skills

Computing Python, Java, C++, MATLAB,
PyTorch, TensorFlow, JAX,
Linux, ROS, Arduino, Unity, Slurm, Colab, LaTeX.

Language English, Chinese.

Relevant Coursework

Brown University
Learning and Sequential Decision Making.
Reintegrating AI.
Probabilistic Methods in Computer Science.
Probability for Computing and Data Analysis.
Computational Linguistics.
Computational Semantics.
Computer Vision for Graphics and Interaction.

UC Berkeley Introduction to Artificial Intelligence.
Introduction to Machine Learning.
Algorithmic Human-Robot Interaction.
Linear Algebra.
Optimization Models in Engineering.

Awards and Honors

Brown University **National Science Foundation Graduate Research Fellowship Program**, 2018.
Jack Kent Cooke Foundation Graduate Scholarship, 2018.

UC Berkeley **Tau Beta Pi, National Engineering Honor Society**, Fall 2014.
Eta Kappa Nu, National EECS Honor Society, Fall 2014.
Term Honor: Honors to Date, Fall 2014, Spring 2015.
Jack Kent Cooke Foundation Undergraduate Transfer Scholarship, 2014.

Service

Brown CS **Google exploreCSR** (explorecsr.cs.brown.edu). 2020-2021.
First-year PhD mentor. 2020-2021.