

Yilong Song

yilong_song@alumni.brown.edu
yilongsong.github.io

Education

University of Minnesota, Doctor of Philosophy in Computer Science
2026 – Present

Minneapolis, MN

Brown University, Master of Science in Computer Science
GPA: 4.0/4.0

Providence, RI

Carleton College, Bachelor of Arts in Computer Science, Mathematics
GPA: 3.79/4.0

Northfield, MN

Distinction in Mathematics

“Exemplary” Writing Portfolio (sample)

Research

- [1] **Yilong Song**, Harshvardhan Chandirasekar, Karthik Desingh, Chen Zhu-Tian. “CrowdMAPS: Crowdsourcing Multiple Actions per State for Real-World Robot Imitation Learning.” *Conference on Robot Learning (CoRL)*, 2026.

Proposed a new data structure for imitation learning: MAPS (multiple actions per state), and using crowdsourcing to collect it. Demonstrated empirically that increasing the number of valid action labels per state significantly increases policy success rate (average 36%). Led the project end-to-end: core idea, development, data collection, real-robot experiments, and analysis.

- [2] **Yilong Song**. “Imitation Learning with Precisely Labeled Human Demonstrations.”  *arXiv preprint*, 2025.

Proposed using precisely labeled human demonstrations directly for imitation learning without cross-embodiment treatment. Showed that said data achieves on average 88.1% of the performance of robot data and further improves policy performance when combined with robot data.

Experience

Professor Zhu-Tian Chen’s Lab

University of Minnesota, MN

Student Researcher

May 2025 – Present

- Researching robot manipulation, learning, data collection, and human-robot interaction.

The Intelligent Robot Lab

Brown University, RI

Student Researcher

February 2024 – May 2025

- Contributed to research projects related to policy learning with actionless videos.

Software Engineering Internship

KEMET Corporation, CO

Software Engineering Intern

July – August 2022

- Implemented error recovery mechanisms in MongoDB to detect transient failures, leading to improvements in database availability and robustness.

- Wrote a pedagogical guide for QAs to launch an end-to-end testing migration to Cypress.