Arjun Gupta

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EDUCATION

University of Illinois at Urbana-Champaign   Urbana, IL
PhD in Electrical and Computer Engineering   *Jan. 2021 - Present*
M.S. in Electrical and Computer Engineering   *Jan. 2021 - Dec. 2022*
B.S. in Computer Engineering   *Aug. 2017 - Dec. 2020*
- Graduated with Highest Honors (GPA: 3.97)

SELECTED PUBLICATIONS

[1] A Training-Free Framework for Precise Mobile Manipulation of Small Everyday Objects   Under Review
Arjun Gupta, Rishik Sathua, Saurabh Gupta   [webpage]

[2] Opening Articulated Structures in the Real World   RSS 2025
Arjun Gupta, Michelle Zhang*, Rishik Sathua*, Saurabh Gupta   [webpage]

[3] Estimating Perceptual Uncertainty to Predict Robust Motion Plans   IROS 2024
Arjun Gupta, Michelle Zhang, Saurabh Gupta   [webpage]

[4] Mitigating Perspective Distortion-induced Shape Ambiguity in Image Crops   ECCV 2024
Aditya Prakash, **Arjun Gupta**, Saurabh Gupta   [webpage]

[5] Predicting Motion Plans for Articulating Everyday Objects   ICRA 2023
Arjun Gupta, Max E. Shepherd, Saurabh Gupta   [webpage]

[6] Learning Value Functions from Undirected State-only Experience   ICLR 2022
Matthew Chang*, **Arjun Gupta***, Saurabh Gupta   [webpage]

[7] Semantic Visual Navigation by Watching YouTube Videos   NeurIPS 2020
Matthew Chang, **Arjun Gupta**, Saurabh Gupta   [webpage]

RESEARCH EXPERIENCE

Amazon Robotics   Seattle, WA
Applied Scientist Intern — Manager: Dr. Nicolas Hudson   *May. 2025 - Aug. 2025*
- Investigating point tracking under occlusion for robot policy learning via sim2real.

Hello Robot Inc.   Martinez, CA
Research Intern — Manager: Dr. Chris Paxton   *Oct. 2024 - Dec. 2024*
- Developed general-purpose grasping functionality for Stretch AI using sim2real techniques.   [webpage]

University of Illinois at Urbana-Champaign   Urbana, IL
PhD Student — Advisor: Prof. Saurabh Gupta   *Jan. 2021 - Present*
- **Real World Robotics.** Developed end-to-end mobile manipulation pipelines for real robots (integrating perception, navigation, and manipulation) which generalize to *in-the-wild* settings across 10+ buildings [1, 2].
- **Computer Vision.** Trained state-of-the-art computer vision models for improving robustness in 3D vision [3, 4].
- **Motion Planning.** Developed a TrajOpt-based approach which outperforms existing planning methods [5].
- **Sim2Real RL.** Designed sim2real reinforcement learning approaches for navigation via learning from videos [6, 7].

AWARDS AND HONORS

Andrew T. Yang Research and Entrepreneurship Award   2022 - 2024
  ∗ Full graduate funding for two years.
Daniel W. and Carol A. Dobberpuhl Award[1]   2020

[1]*Awarded to one student out of a pool of 1000+*

SKILLS

Programming: Python, C++/C, ROS, Matlab.
Software: PyTorch, Keras, Tensorflow, NumPy, SciPy, OpenAI Gym, Git.