

# Arjun Gupta

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## EDUCATION

### University of Illinois at Urbana-Champaign

*PhD in Electrical and Computer Engineering*

*M.S. in Electrical and Computer Engineering*

*B.S. in Computer Engineering*

- Graduated with Highest Honors (GPA: 3.97)

Urbana, IL

*Jan. 2021 - Present*

*Jan. 2021 - Dec. 2022*

*Aug. 2017 - Dec. 2020*

## SELECTED PUBLICATIONS

- |     |  |   |
|-----|--|---|
| [1] | Opening Articulated Objects in the Real World<br><b>Arjun Gupta</b> , Michelle Zhang*, Rishik Sathua*, Saurabh Gupta                     | Under Review<br><a href="#">[webpage]</a> |
| [2] | A Training-Free Framework for Precise Mobile Manipulation of Small Everyday Objects<br><b>Arjun Gupta</b> , Rishik Sathua, Saurabh Gupta | Under Review<br><a href="#">[webpage]</a> |
| [3] | Estimating Perceptual Uncertainty to Predict Robust Motion Plans<br><b>Arjun Gupta</b> , Michelle Zhang, Saurabh Gupta                   | IROS 2024<br><a href="#">[webpage]</a>    |
| [4] | Mitigating Perspective Distortion-induced Shape Ambiguity in Image Crops<br>Aditya Prakash, <b>Arjun Gupta</b> , Saurabh Gupta           | ECCV 2024<br><a href="#">[webpage]</a>    |
| [5] | Predicting Motion Plans for Articulating Everyday Objects<br><b>Arjun Gupta</b> , Max E. Shepherd, Saurabh Gupta                         | ICRA 2023<br><a href="#">[webpage]</a>    |
| [6] | Learning Value Functions from Undirected State-only Experience<br>Matthew Chang*, <b>Arjun Gupta</b> *, Saurabh Gupta                    | ICLR 2022<br><a href="#">[webpage]</a>    |
| [7] | Semantic Visual Navigation by Watching YouTube Videos<br>Matthew Chang, <b>Arjun Gupta</b> , Saurabh Gupta                               | NeurIPS 2020<br><a href="#">[webpage]</a> |

## RESEARCH EXPERIENCE

### University of Illinois at Urbana-Champaign

*PhD Student — Advisor: Prof. Saurabh Gupta*

Urbana, IL

*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].

### Hello Robot Inc.

*Research Intern — Manager: Dr. Chris Paxton*

Martinez, CA

*Oct. 2024 - Dec. 2024*

- Developed general-purpose grasping functionality for Stretch AI using sim2real techniques.

[\[webpage\]](#)

## 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 <sup>1</sup>  | 2020        |
| Omron Electrical Engineering Scholarship <sup>2</sup> | 2019, 2020  |
| Ackmann Family Scholarship <sup>1</sup>               | 2018        |

<sup>1</sup>Awarded to one student out of a pool of 1000+, <sup>2</sup>Awarded to two students out of a pool of 1000+

## SKILLS

**Programming:** Python, C++/C, ROS, Matlab.

**Software:** PyTorch, Keras, Tensorflow, NumPy, SciPy, OpenAI Gym, Git.