

# Shivansh Patel

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## Education

### University of Illinois at Urbana Champaign

Aug. 2021 - Present

PH.D. IN COMPUTER SCIENCE, ADVISOR: SVETLANA LAZEBNIK (3.88/4.0)

### Indian Institute of Technology Kanpur

Aug. 2016 - July. 2020

BACHELOR OF TECHNOLOGY IN ELECTRICAL ENGINEERING (9.0/10.0)

## Research Interests

ROBOTICS, REINFORCEMENT LEARNING, AND COMPUTER VISION

## Publications

### 1. Robotic Manipulation by Imitating Generated Videos with Zero Training Demos

[PDF](#) | [Project](#) | [Code](#)

SHIVANSH PATEL\*, SHRADDHAA MOHAN, ASHER MAI, UNNAT JAIN, SVETLANA LAZEBNIK, YUNZHU LI

Under Review

### 2. A Real-to-Sim-to-Real Approach to Robotic Manipulation with VLM-Generated Iterative Keypoint Rewards

[PDF](#) | [Project](#) | [Code](#)

SHIVANSH PATEL\*, XINCHEN YIN\*, WENLONG HUANG, SHUBHAM GARG, HOOSHANG NAYYERI, LI

FEI-FEI, SVETLANA LAZEBNIK, YUNZHU LI

ICRA, 2025

### 3. Token Efficient Deep Conversational Reasoning With ConvoDAGs

SUMUK SHASHIDHAR, ABHINAV CHINTA, VAIBHAV SAHAI, FARAZ MAHMOOD SIDDIQI, SHIVANSH PATEL

Under Review, 2024

### 4. Language-Aligned Waypoint (LAW) Supervision for Vision-and-Language Navigation in Continuous Environments

[PDF](#) | [Project](#) | [Code](#)

SONIA RAYCHAUDHURI, SAIM WANI, SHIVANSH PATEL, UNNAT JAIN, ANGEL X. CHANG

Empirical Methods in Natural Language Processing (EMNLP), 2021

### 5. Interpretation of Emergent Communication in Heterogeneous Collaborative Embodied Agents

[PDF](#) | [Project](#) | [Code](#)

SHIVANSH PATEL\*, SAIM WANI\*, UNNAT JAIN\*, ALEXANDER SCHWING, SVETLANA LAZEBNIK, MANOLIS

SAVVA, ANGEL X. CHANG

International Conference on Computer Vision (ICCV), 2021

### 6. MultiON: Benchmarking Semantic Map Memory using Multi-Object Navigation

[PDF](#) | [Project](#) | [Code](#)

SAIM WANI\*, SHIVANSH PATEL\*, UNNAT JAIN\*, ANGEL X. CHANG, MANOLIS SAVVA

Neural Information Processing Systems (NeurIPS), 2020

### 7. Robust Explanations for Visual Question Answering

[PDF](#) | [Code](#)

BADRI N. PATRO, SHIVANSH PATEL, VINAY P. NAMBOODIRI

Winter Conference on Applications of Computer Vision (WACV), 2020

### 8. U-CAM: Visual Explanation using Uncertainty based Class Activation Maps

[PDF](#) | [Project](#) | [Code](#)

BADRI N. PATRO, MAYANK LUNAYACH, SHIVANSH PATEL, VINAY P. NAMBOODIRI

International Conference on Computer Vision (ICCV), 2019

### 9. Granular Multimodal Attention Networks for Visual Dialog

[PDF](#)

BADRI N. PATRO, SHIVANSH PATEL, VINAY P. NAMBOODIRI

ICCV workshop on Intelligent Short Video (ISV), 2019

## Internships

### SceniX

New York, USA

RESEARCH INTERN, SUPERVISOR: YUNZHU LI AND CHANGXI ZHENG

Summer 2025

- Achieved SOTA results for simulating a wide range of deformable objects by merging classical physics simulation with learning

### Simon Fraser University (SFU)

Burnaby, Canada

VISITING SCHOLAR, SUPERVISOR: MANOLIS SAVVA AND ANGEL X. CHANG

Jan 2020 - July 2020

- See publication #2, #3, and #4

## Academic Services

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### Challenge Leads

- Multi-Object Navigation (MultiON) Challenge, Embodied AI Workshop, CVPR 2021

### Workshop Program Committee

- eXplainable AI approaches for debugging and diagnosis, NeurIPS 2021
- Embodied AI Workshop, CVPR 2021

### Reviewer

- ICCV 2023, CVPR 2022, ECCV 2022, ICCV 2023, TPAMI, IROS 2025, RA-L, IJCV

## References

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### Svetlana Lazebnik

PH.D. ADVISOR

*Professor, UIUC*

### Yunzhu Li

MENTOR

*Assistant Professor, UIUC*

### Manolis Savva

INTERN MENTOR

*Assistant Professor, SFU*

### Angel X. Chang

INTERN MENTOR

*Assistant Professor, SFU*

### Unnat Jain

MENTOR

*Meta Researcher and CMU Postdoc*

### Vinay Namboodiri

UG ADVISOR

*Faculty member, University of Bath*

## Teaching

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### Graduate Teaching Assistant

DEEP LEARNING FOR COMPUTER VISION CS444, COMPUTER VISION CS543

*UIUC*