

## EDUCATION

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**Georgia Institute of Technology**

*Aug 2020 - Present*

Ph.D. in Machine Learning

Advised by Dhruv Batra and Zolt Kira

**University of Southern California**

*Aug 2016 - May 2020*

B.S. in Computer Science, Minor in Mathematics

Trustee Full Tuition Scholarship, GPA: 3.71 / 4.0

## PUBLICATIONS

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- [5] “Habitat 2.0: Training Home Assistants to Rearrange their Habitat”  
**A. Szot**, A. Clegg, E. Undersander, E. Wijmans, Y. Zhao, J. Turner, N. Maestre, M. Mukadam, D. Chaplot, O. Maksymets, A. Gokaslan, V. Vondrus, S. Dharur, F. Meier, W. Galuba, A. Chang, Z. Kira, V. Koltun, J. Malik, M. Savva, D. Batra  
*Neural Information Processing Systems (Spotlight, top 3% of 9122 submissions)*, 2021 [pdf]
- [4] “Generalizable Imitation Learning from Observation via Inferring Goal Proximity”  
Y. Lee\*, **A. Szot\***, , S. Sun and J. J. Lim (\* indicates equal contribution)  
*Neural Information Processing Systems*, 2021 [pdf]
- [3] “Generalization to New Actions in Reinforcement Learning”  
A. Jain\*, **A. Szot\*** and J. J. Lim (\* indicates equal contribution)  
*International Conference on Machine Learning*, 2020 [pdf]

## PREPRINTS

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- [2] “Meta-IRL: Learning Generalizable Reward Functions from Demonstrations”  
**A. Szot**, A. Zhang, D. Batra, Z. Kira, F. Meier  
*Preprint*, 2022
- [1] “Housekeep: Tidying Virtual Households using Commonsense Reasoning”  
Y. Kant, A. Ramachandran, Sriram Yenamandra, I. Gilitschenski, D. Batra, **A. Szot\***, H. Agrawal\*  
*Preprint*, 2022 [pdf]

## EXPERIENCE

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**Facebook AI Research** *Research Intern*

*May 2022 - Present*

*Advisor: Dr. Akshara Rai and Dr. Ruta Desai*

**Facebook AI Research** *Research Intern*

*May 2021 - December 2021*

*Advisor: Dr. Franziska Meier*

- Research on inverse reinforcement learning.

**CLVR Lab, University of Southern California**

*August 2018 – June 2020*

*Advisor: Prof. Joseph J. Lim*

- Developed a state of the art imitation from observation method.
- Built reinforcement learning agents that can generalize to new actions.
- Created novel benchmarks investigating tool usage and physical reasoning in RL. [web]

**Airbnb** *Software Engineering Intern*

*May 2018 – August 2018*

- Deployed a model to production that predicted and took automated action against account takeover fraud using Scikit-learn, XGBoost, Hive and Presto.
- Resulted in 50% reduction in account takeover fraud with minimal false positives.

**Media Communications Lab, University of Southern California**

*October 2016 – December 2017*

*Advisor: Prof. C.C. Jay Kuo*

- Researched weakly supervised CNNs using clustering approaches to pre-train.

- Ran experiments with TensorFlow, Cython and NumPy then presented results in research discussions.

#### eBay Software Engineering Intern

May 2017 – August 2017

- Delivered a data analytics platform using Scala, Spark, Hadoop and Druid to process petabytes of eBay metrics.
- Employed Spark MLlib unsupervised machine learning algorithms for customer group segmentation.

#### AWARDS

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- **GT Outstanding Online Teaching Assistant:** One of top 2 online TAs in department. *Fall 2021*
- **NSF GRFP Honorable Mention** *2021*
- **USC Viterbi Fellowship:** Research funding given to the top 20 engineering students per class. *2016-2020*
- **USC Trustee Scholarship:** Full tuition scholarship. *2016-2020*
- **USC Provost Fellowship:** Merit based fellowship for summer research funding. *2019*

#### SERVICE AND TEACHING

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##### Workshop / Challenge Organization

- Lead organizer of NeurIPS 2022 “Habitat Rearrangement Challenge” *2022*
- Organizer at Embodied AI Workshop at CVPR 2022 *2022*

##### Teaching

- Graduate Deep Learning Class Teaching Assistant (CS 7643, won outstanding TA award) *Fall 2021*

##### Reviewing

- ICCV 2021, IROS 2021, ICLR 2022, CVPR 2022

##### Mentoring

- Abhinav Harish (GT Masters) *Spring 2022-Present*
- Haytham Huang (GT Undergraduate) *Spring 2022-Present*
- Sriram Yenamandra (GT Masters) *Fall 2021-Present*
- Arun Ramachandran (GT Masters) *Fall 2021-Present*

#### SELECTED PRESS COVERAGE

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More than 7 articles covered Habitat 2.0.

- “How Facebook’s AI is training home robots to tackle the chores you hate”, by Katie Collins, *CNET*, June 30, 2021 [link]
- “Facebook and Matterport collaborate on realistic virtual training environments for AI”, by Devin Coldewey, *Tech Crunch*, June 30, 2021 [link]
- “Facebook updates Habitat environment to train ‘embodied AI’”, by Kyle Wiggers, *VentureBeat*, June 30, 2021 [link]

#### PROJECTS

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- **CAIS++:** Co-founded a club, leading social impact AI projects. Received 200 applications per semester. Created teaching curriculum covering a semester of deep learning content. [web]
- **Voice Conversion:** Unsupervised voice translation between speakers. Received best project award out of 250 graduate students. Implemented CycleGAN and VQ-VAE for audio. [code] [write-up]
- **RL Algorithms:** Implemented and open sourced reinforcement and imitation learning methods. [code]