

Prithvijit Chattopadhyay

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RESEARCH AREAS	Out-of-Distribution Generalization, Robust Machine Learning, Embodied RL	
EDUCATION	School of Interactive Computing, Georgia Tech	2019 - Present
	<i>Ph.D. in Computer Science</i> Advised by Prof. Judy Hoffman Award: Rising Star Doctoral Student Research Award	
	College of Computing, Georgia Tech	2017 - 2019
	<i>M.S. in Computer Science</i> Advised by Prof. Devi Parikh Thesis: Evaluating Visual Conversational Agents via Cooperative Human-AI Games Award: M.S. Research Award	
	Delhi Technological University (Formerly DCE)	2012 - 2016
	<i>B.Tech. in Electrical Engineering</i>	
AWARDS & RECOGNITION	Outstanding reviewer for CVPR 2022 Highlighted reviewer for ICLR 2022 Outstanding reviewer for CVPR 2021 Among top 33% reviewers for ICML 2020 NVIDIA Best Runner Up Paper Award at AROW, ECCV 2020 Recipient: CS-7001 Research Award (2020) - Interactive Computing, Georgia Tech Invited to mentor students at the “New in ML” workshop at NeurIPS 2019 Recognized as one of the highest-scoring reviewers for NeurIPS 2019 Outstanding Reviewer for ICLR 2019 Recipient: IC Student Travel Grant to attend NeurIPS 2018 Among top 30% reviewers for NeurIPS 2018 Recipient: MS Research Award (2018) - College of Computing, Georgia Tech Winner: VT-Hacks, 2017, a Major League Hacking event. Semi-Finalists: ROBOSUB - AUVSI, 2013 out of 30 participating teams Finalists: NIOT SAVE, 2013 out of 27 participating teams Recipient: Merit Scholarships for Undergraduate Academic Performance (2012-2014) Recipient: KVPY and INSPIRE Fellowships, 2012 National Top 1%: Indian National Physics Olympiad (InPhO), 2013	
PUBLICATIONS & PRE-PRINTS (*denotes equal contribution)	PASTA: Proportional Amplitude Spectrum Augmentation for Synthetic to Real Domain Generalization <i>Upcoming pre-print</i> P. Chattopadhyay* , K. Sarangmath*, V. Vijaykumar, J. Hoffman	
	RobustNav: Towards Benchmarking Robustness in Embodied Navigation <i>International Conference on Computer Vision (ICCV) 2021 (Oral)</i> <i>Embodied AI Workshop, CVPR 2021</i> P. Chattopadhyay , J. Hoffman, R. Mottaghi, A. Kembhavi	
	Likelihood Landscapes: A Unifying Principle Behind Many Adversarial Defenses <i>Adversarial Robustness in the Real World (AROW), ECCV 2020 (Talk)</i> NVIDIA Best Paper Runner Up F. Lin, R. Mittapali, P. Chattopadhyay , D. Bolya, J. Hoffman	

Learning to Balance Specificity and Invariance for In and Out of Domain Generalization

European Conference on Computer Vision (ECCV) 2020 (Poster)

Visual Learning with Limited Labels (LwLL), CVPR 2020 (Poster)

P. Chattopadhyay, Y. Balaji, J. Hoffman

IR-VIC: Unsupervised Discovery of Sub-goals for Transfer in RL

International Joint Conference on Artificial Intelligence (IJCAI) 2020 (Poster)

N. Modhe, P. Chattopadhyay, M. Sharma, A. Das, D. Parikh, D. Batra, R. Vedantam

DS-VIC: Unsupervised Discovery of Decision States for Transfer in RL

Task-Agnostic Reinforcement Learning (TARL) Workshop, ICLR 2019 (Poster)

N. Modhe, P. Chattopadhyay, M. Sharma, A. Das, D. Parikh, D. Batra, R. Vedantam

Improving Generative Visual Dialog by Answering Diverse Questions

Conference on Empirical Methods in Natural Language Processing (EMNLP) 2019 (Poster)

V. Murahari, P. Chattopadhyay, D. Batra, D. Parikh, A. Das

EvalAI: Towards Better Evaluation Systems for AI Agents

arXiv 2019 (Technical Report)

Workshop on AI Systems, SOSP 2019 (Poster)

D. Yadav, R. Jain, H. Agrawal, P. Chattopadhyay, T. Singh, A. Jain, S. Singh, S. Lee, D. Batra

Choose Your Neuron: Incorporating Domain Knowledge Through Neuron-Importance

European Conference on Computer Vision (ECCV) 2018 (Poster)

Continual Learning Workshop, NeurIPS 2018 (Poster)

Visually Grounded Interaction and Language (ViGIL), NeurIPS 2018 (Poster)

R. Selvaraju*, P. Chattopadhyay*, M. Elhoseiny, T. Sharma, D. Batra, D. Parikh, S. Lee

Do Explanations make VQA models more predictable to a human?

Conference on Empirical Methods in Natural Language Processing (EMNLP) 2018 (Poster)

A. Chandrasekaran*, V. Prabhu*, D.Yadav*, P. Chattopadhyay*, D. Parikh

Evaluating Visual Conversational Agents via Cooperative Human-AI Games

AAAI Conference on Human Computation and Crowdsourcing (HCOMP) 2017 (Oral)

P.Chattopadhyay*, D.Yadav*, V. Prabhu, A. Chandrasekaran, A. Das, S. Lee,

D. Batra, D. Parikh

It Takes Two to Tango: Towards Theory of AI's Mind

Chalearn Looking at People Workshop, CVPR 2017 (Oral)

A. Chandrasekaran*, D.Yadav*, P. Chattopadhyay*, V. Prabhu*, D. Parikh

Counting Everyday Objects in Everyday Scenes

IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2017 (Spotlight)

P.Chattopadhyay*, R.Vedantam*, R. Selvaraju, D. Batra, D. Parikh

Delhi Technological University: Design and Development of the Littoral AUV Zyra 2.0

AUVSI RoboSub Journal 2014 (Technical Report)

EXPERIENCE

PRIOR, Allen Institute for AI

May 2022 - Aug 2022

Research Intern, mentored by Ani Kembhavi, Roozbeh Mottaghi and Judy Hoffman

Learning representations of environments from house tours to improve sample efficiency and generalization for embodied agents across tasks and simulators

PRIOR, Allen Institute for AI

May 2020 - Aug 2020

Research Intern, mentored by Ani Kembhavi, Roozbeh Mottaghi and Judy Hoffman

Assessing the robustness of embodied navigation agents to visual and dynamics corruptions

Deep Learning Group, Microsoft Research AI May 2018 - Aug 2018
Research Intern, mentored by Hamid Palangi
 Improving goal-driven visually grounded dialog under the presence of an adversarial utterance evaluator

Visual Intelligence Lab, Georgia Tech Aug 2017 - Aug 2019
Research Assistant, mentored by Prof. Devi Parikh and Prof. Dhruv Batra
 Worked on problems at the intersection of computer vision and natural language processing with a focus towards building intelligent and interpretable systems.

CVMLP Lab, Virginia Tech Jun 2015 - May 2017
Research Assistant, mentored by Prof. Devi Parikh and Prof. Dhruv Batra
 Worked on scene-understanding problems such as object detection and counting in everyday scenes with a downstream focus towards visual question answering

Robotics Research Lab, IIIT Hyderabad Dec 2014 - Jan 2015
Research Intern, mentored by Prof. K Madhava Krishna
 Implemented an efficient strategy for a robot to discover, recognize and navigate to a selected few objects among some scattered in an environment, based on a “guess from far and recognize from near” strategy.

IACS, Kolkata Jun 2014 - Aug 2014
Research Intern, mentored by Prof. Soumitra Sengupta
 Worked on finding Charged Rotating Black Hole solutions in Einstein-Gauss-Bonnet dilaton coupled gravity and simulated the conditions for the existence of multiple horizons in constant scalar curvature $f(R)$ gravity.

Autonomous Underwater Vehicle Team, DTU Aug 2012 - Aug 2016
Undergraduate Researcher, mentored by Prof. R K Sinha
Underwater Acoustics: Developed and implemented range estimation algorithms for Passive Source Localization from Time Difference of Arrival (TDOA) values in conjunction with machine vision techniques.

PROFESSIONAL SERVICES

Reviewing
 IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2018 - 2023
 Neural Information Processing Systems (NeurIPS) 2018 - 2021
 Association for Computational Linguistics (ACL) 2019
 International Conference on Learning Representations (ICLR) 2019 - 2022
 IEEE International Conference on Robotics and Automation (ICRA) 2021 - 2022
 International Conference on Machine Learning (ICML) 2019 - 2020
 European Conference on Computer Vision (ECCV) 2018
Challenge Organization
 Visual Dialog Challenge CVPR 2020
 (co-organized with Vishvak Murahari)

TEACHING EXPERIENCE

Teaching Assistant
 CS 4476: Introduction to Computer Vision Spring 2021
Instructor: Prof. Judy Hoffman

Teaching Assistant
 CS 8803: Machine Learning with Limited Supervision Fall 2022
Instructor: Prof. Judy Hoffman

REFERENCES (available upon request)

- Prof. Judy Hoffman, Georgia Tech (email: judy@gatech.edu)
- Dr. Ani Kembhavi, PRIOR AllenAI (email: anik@allenai.org)
- Dr. Roozbeh Mottaghi, PRIOR AllenAI (email: roozbehm@allenai.org)
- Prof. Devi Parikh, Georgia Tech (email: parikh@gatech.edu)
- Prof. Mohamed H. Elhoseiny, KAUST (email: mohamed.elhoseiny@kaust.edu.sa)

