Ananye Agarwal

Curriculum Vitae

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Education

2021-current   **Carnegie Mellon University**
Ph.D. candidate in Machine Learning
Advisor: Deepak Pathak

2017-2021   **Indian Institute of Technology, Delhi**
B.Tech. in Computer Science and Engineering
Major GPA: 10 / 10 (ranked 1st in class)   Cumulative GPA: 9.978 / 10
President's gold medalist (valedictorian)

Honors and Awards

2017   **Gold Medal** at the International Physics Olympiad (IPhO)
2017   **Ranked 3rd** in JEE-Advanced out of 180K candidates
2017   **Ranked 3rd** in JEE-Main out of 1.2 million candidates
2021   **President's Gold Medal** for best academic performance at IIT Delhi
2022   **Best Systems Paper Award** at Conference of Robot Learning '22
2022   **Best Paper Award** at CVPR '22 Multimodal Learning Workshop

Industry Experience

Aug'23-Present   **Skild AI**, *Pittsburgh, USA*
Founding researcher

May'20-Jun'20   **Samsung Research**, *Seoul, Korea*
Research Intern

Jun'20-Jul'20   **Uber Resarch**
Research Internship

May'19-Aug'19   **Microsoft Research**, *Bangalore, India*
Research Intern

Publications

[10]   **LocoFormer: Generalist Locomotion via Long-context Adaptation**
Under submission at CoRL 2025
Min Liu, Deepak Pathak, ***Ananye Agarwal***

[9] **SAPG: Split and Aggregate Policy Gradients**
International Conference on Machine Learning (ICML) 2024
Oral
Jayesh Singla*, ***Ananye Agarwal****, Deepak Pathak

[8] **Demonstrating Learning from Humans on Open-Source Dexterous Robot Hands**
Robotic Science and Systems (RSS) 2024
Kenneth Shaw, ***Ananye Agarwal***, Shikhar Bahl, Mohan Kumar Srirama, Alexandre Kirchmeyer, Aditya Kannan, Aravind Sivakumar, Deepak Pathak

[7] **Legolas: Deep Leg-Inertial Odometry**
Conference of Robot Learning (CoRL) 2024
Justin Wasserman, ***Ananye Agarwal***, Rishabh Jangir, Girish Chowdhary, Deepak Pathak, Abhinav Gupta

[7] **SPIN: Simultaneous Perception Interaction and Navigation**
CVPR 2024
Shagun Uppal, ***Ananye Agarwal***, Haoyu Xiong, Kenneth Shaw

[7] **Extreme Parkour with Legged Robots**
International Conference on Robotics and Automation (ICRA) 2024
Xuxin Cheng* Kexin Shi* ***Ananye Agarwal***, Deepak Pathak

[6] **Dexterous Functional Grasping**
Conference of Robot Learning (CoRL) 2023
Ananye Agarwal, Shagun Uppal, Kenneth Shaw, Deepak Pathak

[5] **LEAP Hand: Low-Cost, Efficient, and Anthropomorphic Hand for Robot Learning**
Robotics Science and Systems (RSS) 2023
Kenneth Shaw, ***Ananye Agarwal***, Deepak Pathak

[4] **Legged Locomotion in Challenging Terrains using Egocentric Vision**
Conference of Robot Learning (CoRL) 2022
Best Systems Paper Award
Ananye Agarwal*, Ashish Kumar*, Jitendra Malik[†], Deepak Pathak[†]

[3] **Coupling Vision and Proprioception for Navigation of Legged Robots**
Conference on Computer Vision and Pattern Recognition (CVPR) 2022
Best Paper Award at Multimodal Learning Workshop
Zipeng Fu*, Ashish Kumar*, ***Ananye Agarwal***, Haozhi Qi, Jitendra Malik, Deepak Pathak

[2] **SiameseXML: Siamese Networks meet Extreme Classifiers with 100M Labels**
International Conference of Machine Learning (ICML) 2021
Kunal Dahiya, ***Ananye Agarwal***, Deepak Saini, Gururaj K, Jian Jiao, Amit Singh, Sumeet Agarwal, Purushottam Kar, Manik Varma

[1] **End-to-End Neuro-Symbolic Architecture for Image-to-Image Reasoning Tasks**
Ananye Agarwal, Pradeep Shenoy, Mausam

Service

2024	**CMU MLD PhD admissions committee** *Member*
2022	**CoRL Workshop Organizer** *Sim-to-Real Robot Learning: Locomotion and Beyond*
2021-2023	**Reviewer** *NeurIPS 2024, CoRL 2024, NeurIPS 2023, ICCV 2023, CVPR 2023*
2023	**CMU MLD MS admissions committee** *Member*

Media Coverage

Extreme Parkour with Legged Robots
- *Video Friday (IEEE Spectrum)*
- *Small Robotic Dog Takes Giant Parkour Leaps (CMU)*
- *Robot dogs can already do this. (Weixin)*
- *CMU robot dog goes downstairs upside down! Released and open-source immediately. (Weixin)*
- *Extreme Parkour with Legged Robots (Hacker News)*

Legged Locomotion in Challenging Terrain using Egocentric Vision
- *Watch this robot dog scramble over tricky terrain just by using its camera (MIT Tech Review)*
- *This robotic dog can walk over just about any terrain (TechCrunch)*
- *Video Friday: Little Robot, Big Stairs (IEEE Spectrum)*
- *CMU Researchers Develop Low-Cost Robot Dog That Can Climb Stairs and Rocks (TechEBlog)*
- *Taking a look at a new advancement in AI (CBS Pittsburgh Live TV)*
- *Low-Cost Robot Navigates Nearly Any Obstacle (Unite.AI)*
- *Budget robots inspired by animals a step forward for humans (Technology)*
- *Researchers build a four-legged robot that can climb stairs, hills (Techcircle)*
- honeybee life spans, little robots, near-sightedness genes, and ear pod hearing aids (*Cosmos*)

Invited Talks

Oct 2024	**Guest Talk at Prof. Pieter Abbeel's lab** *Scaling RL and simulation for general-purpose robot skills*
Jun 2024	**ELLIS Workshop on 3D Computer Vision and Robotics** *Legged locomotion and extreme parkour using egocentric vision*
Jan 2024	**Guest Lecture at UMich EECS 598-010: Action and Perception** *Building robots that adapt*

Jan 2024   **Guest Lecture at UC Irvine MAE195: Introduction to Robot Motion Planning & Navigation**

General-purpose robotics using large-scale simulation