

CONTACT INFORMATION 60 Fifth Avenue, Fl. 5
New York, NY 10011

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EDUCATION **New York University** Sep. 2020 – Present
Courant Institute of Mathematical Sciences
Ph.D. Candidate in Computer Science
Advisor: Lerrel Pinto

Massachusetts Institute of Technology Sep. 2015 – Aug. 2020
M.Eng. in Electrical Engineering and Computer Science Jan. ‘19 – Aug. ‘20
Advisor: Aleksander Mądry
S.B. in Mathematics and in Computer Science Sep. ‘15 – Jun. ‘19

RESEARCH EXPERIENCE **Hello Robot Inc.;** Research Consultant with Dr. Aaron Edsinger Jan. ‘24 – May ‘24
GenAI & FAIR @ Meta AI; Visiting Scientist with Dr. Ishan Misra Oct. ‘22 – Oct. ‘23
Embodied AI @ Meta AI; Reserach Intern with Dr. Arthur Szlam May ‘22 – Sep. ‘22

HONORS AND AWARDS **PhD Communications Award,** Amazon Robotics Research Symposium 2024
Best Paper, Lifelong Learning for Home Robots workshop @ CoRL 2024 2024
Outstanding Paper, MFM-EAI workshop @ ICML 2024 2024
Best Demo Award (Finalist), Intl. Conf. on Robotics & Automation (ICRA) 2024
Apple Scholars in AI/ML Fellowship, Apple MLR 2023–25
Two Sigma Fellowship, (Finalist, Declined) 2023
Jacob T. Schwartz Ph.D. Fellowship, NYU Courant 2023
AI Mentorship (AIM) Program, Meta & NYU 2022–23
Best Paper, Language and Robot Learning workshop @ CoRL 2022 2022
Burchard Scholars Program, MIT 2018–19
AMD Undergraduate Research and Innovation Scholarship, MIT 2017–18
Silver Medal, International Mathematical Olympiad (IMO) 2014
Bronze Medal, International Mathematical Olympiad (IMO) ×2 2012–13
Natl. Team Bangladesh, International Olympiad in Informatics (IOI) ×2 2012, 2015
National Champion, Bangladesh Mathematical Olympiad ×6 2009–14

RESEARCH MENTORING **Current Students**

Haritheja Etukuru	2023 – Now, BS @ New York University; <i>Grad.</i> ‘25
Omar Rayyan	2024 – Now, BS @ NYU Abu Dhabi; <i>Grad.</i> ‘25
Zhanqiu “Jack” Guo	2024 – Now, BS @ New York University; <i>Grad.</i> ‘25
Lisa Kondrich	2024 – Now, MS @ New York University; <i>Grad.</i> ‘26
Norihito Naka	2023 – Now, MS @ New York University; <i>Grad.</i> ‘25
Yibin Wang	2022 – Now, BS, MS @ New York University; <i>Grad.</i> ‘25

Past Students

Seungjae “Jay” Lee <i>Next Ph.D. at UMD</i>	2023 – 24, MS @ Seoul National University
Peiqi Liu <i>Next at Hello Robot Inc.</i>	2023 – 24, BS @ New York University
Yaswanth Orru <i>Next at Fauna Robotics</i>	2023 – 24, MS @ New York University
Anant Rai <i>Next at 1X Technologies</i>	2022 – 23, MS @ New York University
Yiqian “Eva” Liu <i>Next MS at Columbia University</i>	2022 – 23, BS @ New York University
Zichen “Jeff” Cui <i>Next Ph.D. at NYU GRAIL</i>	2022 – 24, MS @ New York University
Ariuntaya Altanzaya <i>Next at Roboflow</i>	2022–23, MS @ New York University
Sridhar Pandian Arunachalam <i>Next at 1X Technologies</i>	2021–22, MS @ New York University
Jyothish Pari <i>Next Ph.D. at MIT</i>	2020 – 21, BS @ New York University

INVITED TALKS On Building General, Zero-Shot Robot Policies

Cornell University CS 4756/5756: Robot Learning	Nov. 2024
Harvard Computational Robotics Group	Oct. 2024
MIT Embodied Intelligence Seminar	Oct. 2024
OpenAI Robotics Reading Group	Oct. 2024
CMU Manipulation Group Seminar	Sep. 2024

Behavior Generation with Latent Actions

HuggingFace LeRobot Research Talks	Aug. 2024
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On Bringing Robots Home

Apple AI/ML Research	May 2024
UMich EECS 598: Action & Perception	Mar. 2024
Google Deepmind Robotics	Mar. 2024
Berkeley Robot Learning Lab	Feb. 2024
Meta Embodied AI Seminar	Jan. 2024
NYU CILVR Seminar	Dec. 2023

Robot Learning in a Post-Turing World

Honda Research, Tokyo	Jul. 2023
Purdue University	Apr. 2023
REAL Lab @ Columbia (now Stanford)	Nov. 2022

TUTORIALS

Supervised Policy Learning for Real Robots

Robotics: Science and Systems (RSS) 2024

<https://supervised-robot-learning.github.io>

Shafiullah, Nur Muhammad Mahi, Feng, Siyuan, Pinto, Lerrel & Tedrake, Russ

**TEACHING
EXPERIENCE**

Graduate Deep Reinforcement Learning (CSCI-GA 3033-090) Fall 2021
New York University
Graduate Teaching Assistant

Introduction to Machine Learning (6.036) ×2
Jointly Instructed with **Applied Machine Learning (6.862)** Spring & Fall 2019
Massachusetts Institute of Technology
Graduate Teaching Assistant

Principles of Discrete Applied Mathematics (18.200) Fall 2018
Massachusetts Institute of Technology
Teaching Assistant (Grading)

Design and Analysis of Algorithms (6.046/18.410) Fall 2015 – Spring 2017
Massachusetts Institute of Technology
Volunteer Student Tutor with Eta Kappa Nu (HKN) Honor Society

Combinatorics and Euclidean Geometry 2010–15, 2022–23
Bangladesh Mathematical Olympiad National Camps
Instructor and Deputy Leader for the National Math Team

**ACADEMIC
SERVICE**

Workshop and Tutorial Organization
7th Workshop on Robot Learning @ ICLR ‘25 (upcoming)
Tutorial on Supervised Policy Learning for Real Robots @ RSS ‘24
1st Workshop on Vision-Language Models for Navigation and Manipulation @ ICRA ‘24
1st Workshop on Learning Dexterous Manipulation @ RSS ‘23

Peer Reviewing
Robotics — RSS, CoRL, RA-L, ICRA, T-RO, IROS, IJRR
Machine Learning — ICLR, NeurIPS, ICML
Computer Vision — T-PAMI

**PRESS
COVERAGE**

DynaMem: Online Dynamic Spatio-Semantic Memory for Open World Mobile Manipulation (coverage as part of Stretch AI)
The Robot Report, IEEE Spectrum

Robot Utility Models: General Policies for Zero-Shot Deployment in New Environments
MIT Technology Review, The Robot Report, Elektropraktiker (Germany), IndiaAI.gov (India)

OK Robot: What Really Matters in Integrating Open-Knowledge Models for Robotics
MIT Technology Review, Fox News, VentureBeat, TechXplore, Notebookcheck, Digital Information World (Pakistan)

On Bringing Robots Home
MIT Technology Review, New Scientist, TechXplore, TV Tokyo (Japan), Neue Zürcher Zeitung (Switzerland), NDTV (India), MarkTechPost, Washington Square News

Open X-Embodiment: Robotic Learning Datasets and RT-X Models
VentureBeat, Tech Times, Synced Review (Canada), TechForge (UK)
Analytics India Magazine (India)

The Surprising Effectiveness of Representation Learning for Visual Imitation
TechXplore

PREPRINTS

[†] Equal Contribution, [‡] Equal Advising. Works Presented Reverse Chronologically.

- [1] **DynaMem: Online Dynamic Spatio-Semantic Memory for Open World Mobile Manipulation** DOI: [ARXIV:2411.04999](#)
International Conference of Robotics and Automation (ICRA) (Under Review)
Live Demo at Conference on Robot Learning (CoRL) 2024
Best Paper Award at CoRL 2024 Workshop on Lifelong Learning for Home Robots
 Liu, P., Guo, Z., Warke, M., Chintala, S., Paxton, C., *Shafiullah, Nur Muhammad Mahi*[†] & Pinto, L.[‡]
- [2] **Robot Utility Models: General Policies for Zero-Shot Deployment in New Environments** DOI: [ARXIV:2409.05865](#)
International Conference of Robotics and Automation (ICRA) (Under Review)
Live Demo at Conference on Robot Learning (CoRL) 2024
Oral Presentation at CoRL 2024 Workshop on Language and Robot Learning (LangRob)
 Etukuru, H.[†], Naka, N., Hu, Z., Lee, S., Mehu, J., Edsinger, A., Paxton, C., Chintala, S., Pinto, L., *Shafiullah, Nur Muhammad Mahi*[†]
- [3] **On Bringing Robots Home** DOI: [ARXIV:2311.16098](#)
International Journal of Robotics Research (Under Review)
Live Demo at Neural Information Processing Systems (NeurIPS) 2023
Best Demo Award (Finalist) at International Conference on Robotics and Automation (ICRA) 2024
Shafiullah, Nur Muhammad Mahi[†], Rai, A.[†], Etukuru, H., Liu, Y., Misra, I., Chintala, S., Pinto, L.

REFEREED PUBLICATIONS

- [4] **OK-Robot: What Really Matters in Integrating Open-Knowledge Models for Robotics**
Robotics: Science and Systems (RSS) 2024
Live demo at International Conference on Robotics and Automation (ICRA) 2024
 Liu, P.[†], Orru, Y.[†], Vakil, J., Paxton, C., *Shafiullah, Nur Muhammad Mahi*[†] & Pinto, L.[‡]
- [5] **Behavior Generation with Latent Actions**
Spotlight (3.5%) at International Conference of Machine Learning (ICML) 2024
Outstanding Paper Award at Multi-modal Foundation Models for Embodied AI workshop, ICML 2024
 Lee, S., Wang, Y., Etukuru, H., Kim, H., *Shafiullah, Nur Muhammad Mahi*[†] & Pinto, L.[‡]
- [6] **Open X-Embodiment: Robotic learning datasets and RT-x models**
Best Paper Award at International Conference in Robotics and Automation (ICRA) 2024
 Open X-Embodiment Collaboration
- [7] **CLIP-Fields: Weakly Supervised Semantic Fields for Robotic Memory**
Robotics: Science and Systems (RSS) 2023
Best Paper Award at CoRL Workshop on Language and Robot Learning 2023
Shafiullah, Nur Muhammad Mahi, Paxton, C., Pinto, L., Chintala, S., Szlam, A.
- [8] **From Play to Policy: Conditional Behavior Generation from Uncurated Robot Data**
Oral Presentation (5%) at Intl. Conference on Learning Representations (ICLR) 2023
 Cui, Zichen, Wang, Yibin, *Shafiullah, Nur Muhammad Mahi*, Pinto, Lerrel
- [9] **Behavior Transformers: Cloning k Modes with One Stone**
Neural Information Processing System (NeurIPS) 2022
Shafiullah, Nur Muhammad Mahi, Cui, Zichen, Altanzaya, Ariuntaya, Pinto, Lerrel

- [10] **The Surprising Effectiveness of Representation Learning for Visual Imitation**
Robotics: Science and Systems (RSS) 2022
 Pari, J.[†], *Shafiullah, Nur Muhammad Mahi*[†], Arunachalam, S.P., Pinto, L.
- [11] **One After Another: Learning Incremental Skills for a Changing World**
International Conference on Learning Representations (ICLR) 2022
Shafiullah, Nur Muhammad Mahi, Pinto, Lerrel
- [12] **Training for Faster Adversarial Robustness Verification via Inducing ReLU Stability**
International Conference on Learning Representations (ICLR) 2019
 Xiao, K. Y., Tjeng, V., *Shafiullah, Nur Muhammad Mahi*, Mądry, A.

OUTREACH, VOLUNTEERING, & SOCIAL GOOD	Mentor, Ph.D. Application Advising, NYU GRAIL	2021–Present
	Mentor, Collegiate Research Initiative, NYU	2023
	Deputy Leader, Bangladesh National Math Team, IMO 2023 Japan	2023
	Consultant, Bangladesh National Data Analytics Task Force (COVID-19)	2020–22
	Online Learning Transition Consultant, Brac University Bangladesh	2020–21
	Internal Relations Chair, MIT HKN Honor Society	2019–20
	MIT Global Teaching Lab, Stuttgart, Germany	2018
	Editor (Photography), THE TECH, MIT's Student Newspaper	2017–19
	MIT Peer Mentoring Program	2017–18
	Co-president, MIT Bangladeshi Students Association	2016–18
	Co-president, MIT International Students Association	2016–17
	Volunteer Tutor, MIT HKN Honor Society	2015–17
	Mentor, Bangladesh Olympiad in Informatics	2014–2015
	Mentor, Bangladesh Mathematical Olympiad	2010–2015

- REFERENCES
1. **Lerrel Pinto**, Assistant Professor of CS, NYU Courant. lerrel@cs.nyu.edu
 2. **Russ Tedrake**, Professor of EECS, Aero/Astro, MechE, MIT. russt@mit.edu
 3. **Abhinav Gupta**, Professor, CMU Robotics Institute. abhinavg@cs.cmu.edu
 4. **Rob Fergus**, Professor of CS, NYU Courant. fergus@cs.nyu.edu
 5. **Charles C. Kemp**, Cofounder & Chief Technology Officer, Hello Robot Inc. Previously Associate Professor, Georgia Institute of Technology. ck@hello-robot.com