

Mehul Damani

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Education

- Ph.D. Massachusetts Institute of Technology (MIT)** Aug 2022 – present
Ph.D. candidate in Computer Science
 • **Advisor:** [Jacob Andreas](#) ; **GPA:** 4.9/5.0
- B.Eng Nanyang Technological University (NTU)** Aug 2018 – May 2022
Bachelor's in Mechanical Engineering
 • **GPA:** 4.74/5.0 ; Honours (Highest Distinction)

Experience

- MIT-IBM Watson AI Lab** Cambridge, MA
Research Intern
 May 2025 – present
 • Reinforcement Learning for LLM tool use.
- New York University** Remote
Research Intern (Advised by [Lerrel Pinto](#))
 Jan 2021 – Aug 2022
 • Developed curriculum generation method that improved performance by upto 20% on robotic tasks.
- National University of Singapore** Singapore
Research Intern (Advised by [Guillaume Sartoretti](#))
 Apr 2020 – July 2022
 • Developed decentralized reinforcement learning (RL) methods for multi-agent systems.
 • Co-authored 4 papers, open-sourced code with 100+ stars on Github.
 • Achieved fourth position in the RL track of the NeurIPS 2020 Flatland Challenge.
- Satellite Research Centre (NTU)** Singapore
Research Intern
 Sept 2019 – Apr 2020
 • Developed regression models to characterize drift and bias of sensors for integration into ADCS of a satellite.
- Temasek Labs (NTU)** Singapore
Research Intern (Advised by Holden Li)
 May 2019 – Feb 2020
 • Launched a high-altitude balloon (HAB) in Malaysia, gathering climate data from the near-space region.

Publications

- [9] **The Surprising Effectiveness of Test-Time Training for Abstract Reasoning** 2025
 Ekin Akyurek, **Mehul Damani**, Linlu Qiu, Han Guo, Yoon Kim, Jacob Andreas
International Conference on Machine Learning (ICML)
- [8] **Learning How Hard to Think: Input-Adaptive Allocation of LM Computation** 2025
Mehul Damani, Idan Shenfeld, Andi Peng, Andreea Bobu, Jacob Andreas
International Conference on Learning Representations (ICLR)
- [7] **Open Problems and Fundamental Limitations of Reinforcement Learning from Human Feedback** 2023
 Stephen Casper, Xander Davies, Claudia Shi, Thomas Krendl Gilbert, Jérémy Scheurer, Javier Rando, Rachel Freedman, Tomasz Korbak, David Lindner, Pedro Freire, Tony Wang, Samuel Marks, Charbel-Raphaël Segerie, Micah Carroll, Andi Peng, Phillip Christof-fersen, **Mehul Damani**, Stewart Slocum, Usman Anwar, Anand Siththaranjan, Max Nadeau, Eric J Michaud, Jacob Pfau, Dmitrii Krashennnikov, Xin Chen, Lauro Langosco, Peter Hase, Erdem Biyik, Anca Dragan, David Krueger, Dorsa Sadigh, Dylan Hadfield-Menell
Transactions on Machine Learning Research (TMLR)

[6] Mitigating Generative Agent Social Dilemmas	2023
Julian Yocum, Phillip Christoffersen, Mehul Damani , Justin Svegliato, Dylan Hadfield-Menell, Stuart Russell <i>NeurIPS 2023 Foundation Models for Decision Making Workshop</i>	
[5] Formal Contracts Mitigate Social Dilemmas in Multi-Agent RL	2023
Andreas Haupt, Phillip Christoffersen, Mehul Damani , Dylan Hadfield-Menell <i>Autonomous Agents and Multi-Agent Systems</i>	
[4] SocialLight: Distributed Cooperation Learning towards Network-Wide Traffic Signal Control	2023
Harsh Goel, Yifeng Zhang, Mehul Damani , Guillaume Sartoretti <i>International Conference on Autonomous Agents and Multiagent Systems</i>	
[3] Distributed Reinforcement Learning for Robot Teams: a Review	2022
Yutong Wang, Mehul Damani , Pamela Wang, Yuhong Cao, Guillaume Sartoretti <i>Current Robotics Reports, Springer</i>	
[2] PRIMAL2: Pathfinding Via Reinforcement and Imitation Multi-Agent Learning - Lifelong	2021
Mehul Damani , Zhiyao Luo, Emerson Wenzel, Guillaume Sartoretti <i>IEEE Robotics and Automation Letters</i>	
[1] Flatland Competition 2020: MAPF and MARL for Efficient Train Coordination on a Grid World	2020
Florian Laurent, Manuel Schneider, Christian Scheller, Jeremy Watson, Jiaoyang Li, Zhe Chen, Yi Zheng, Shao-Hung Chan, Konstantin Makhnev, Oleg Svidchenko, Vladimir Egorov, Dmitry Ivanov, Aleksei Shpilman, Evgenija Spirovska, Oliver Tanevski, Aleksandar Nikov, Ramon Grunder, David Galevski, Jakov Mitrovski, Guillaume Sartoretti, Zhiyao Luo, Mehul Damani , Nilabha Bhattacharya, Shivam Agarwal, Adrian Egli, Erik Nygren, Sharada Mohanty <i>NeurIPS 2020 Competition and Demonstration Track</i>	

Projects

Adversarial Vulnerabilities of CLIP	Repo
<ul style="list-style-type: none"> Generated interpretable, universal perturbations that caused misclassification of images by OpenAI's CLIP model. 	
MA-Sort	Repo
<ul style="list-style-type: none"> Developed multi-agent RL benchmark to test emergence of dominance hierarchies in a group of RL agents. 	
Vigilant Bot	Project Page
<ul style="list-style-type: none"> Developed RNN-based embedded device for detecting hand gestures and sending automated distress signals. 	
Vertical Take-off & Landing Aircraft (VTOL)	Blog
<ul style="list-style-type: none"> Designed, assembled and tested an electric Vertical Take-off and Landing aircraft (VTOL) prototype. 	
Optimal Debris Deorbiting System	Report
<ul style="list-style-type: none"> Conceptualized a method to deorbit space debris from low-earth orbit (LEO) using bidirectional ion thrusters. 	

Skills

Languages: Python, C, MATLAB

Maching Learning: TensorFlow, Torch, HuggingFace, Ray, WandB

Other: Conda, Docker, Git, Linux, Slurm

Honors and Awards

<ul style="list-style-type: none"> Vicom Book Prize, <i>Top Scorer in Thermodynamics out of 500 students</i> 	2019
<ul style="list-style-type: none"> Dean's List, <i>Top 5% of cohort</i> 	2019, 2020
<ul style="list-style-type: none"> Kishore Vaigyanik Protsahan Yojana Fellowship, <i>Awarded by Department of Science and Technology, India</i> 	2017
<ul style="list-style-type: none"> National Talent Search Scholar, <i>Awarded by National Council on Educational Research, India</i> 	2017

- Invited Tedx speaker on Black Holes and Time Travel 2017

Reviewing

- Transactions on Machine Learning Research (TMLR) 2025
- Conference on Neural Information Processing Systems (NeurIPS) 2022, 2024
- International Conference on Learning Representations (ICLR) 2023, 2025
- International Conference on Robotics and Automation (ICRA) 2021-2023
- International Conference on Intelligent Robots and Systems (IROS) 2023
- International Conference on Machine Learning (ICML) 2023, 2025
- Association for the Advancement of Artificial Intelligence (AAAI) 2022
- Robotics and Automation Letters (RA-L) 2022-2024

Teaching

- Teaching Assistant for 6.8300 (Advances in Computer Vision) 2024
- Peer Tutor for MA2007 (Thermodynamics) 2021
- Organized tutorial on Arduino-powered robotic cars for high-school students. 2020