

**ULYANA PITERBARG**  
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## EDUCATION

Ph.D., Computer Science (GPA 3.9/4.0) <i>Courant Institute of Mathematical Sciences, New York University</i> Advisors: Prof. Rob Fergus, Prof. Lerrel Pinto	2021 - 2026
B.S., Mathematics with Computer Science (GPA 4.9/5.0) <i>Massachusetts Institute of Technology</i> Advisors: Prof. Joshua Tenenbaum, Prof. Jörn Dunkel	2017 - 2021

## HONORS & AWARDS

NSF Graduate Research Fellowship	2022-2025
Google DeepMind Ph.D. Scholarship	2021-2022
NYU Henry M. MacCracken Doctoral Fellowship	2021-2026
MIT Quest for Intelligence Undergraduate Research and Innovation Scholarship	2020-2021
EPFL School of Life Sciences Summer Research Program Fellowship	2018
National Merit Scholarship	2017

## EMPLOYMENT

Ph.D. Research Intern, AI Frontiers, <i>Microsoft Research</i>	2024
Ph.D. Research Intern, Applied Science, <i>Google LLC</i>	2021
Researcher, Ocean Processes, <i>Climate Modeling Alliance</i>	2020-2021
Undergraduate Researcher, <i>MIT Computational Cognitive Science Group</i>	2018-2020
Investment Associate Intern, <i>Bridgewater Associates LP</i>	2020
Software Engineering Intern, Machine Learning Operations, <i>Spell</i>	2019
Technical Assistant, Space Systems and Technology Division, <i>MIT Lincoln Laboratory</i>	2017-2018
Exhibitions Design Intern, <i>American Museum of Natural History</i>	2017

## PUBLICATIONS

**Piterbarg, U.**, Pinto, L., & Fergus, R. (2024). `diff` History for Neural Language Agents. *41st International Conference on Machine Learning (ICML)*.

Allen, K. R., Smith, K., **Piterbarg, U.**, Chen, R., & Tenenbaum, JB. (In Preparation). Rapid Multi-task Learning with Relational Program Policies.

**Piterbarg, U.**, Pinto, L., & Fergus, R. (2023). NetHack is Hard to Hack. *37th Conference on Neural Information Processing Systems (NeurIPS)*.

Ramadhan, A., Marshall, J., Souza, A., Lee, XK., **Piterbarg, U.**, Hillier, A., LeClaire Wagner, G., & Rackauckas, C. (2023). Capturing Missing Physics in Climate Model Parameterizations using Neural Differential Equations. *arXiv preprint arXiv:2010.12559 (In Submission to JAMES)*.

Allen, K. R., Smith, K., **Piterbarg, U.**, Chen, R., & Tenenbaum, JB. (2020). Abstract Strategy Learning Underlies Flexible Transfer in Physical Problem Solving. In *CogSci*.

## INVITED TALKS

NetHack is Hard to Hack, <i>NYU CILVR Seminar</i>	2024
Structured Losses for Neural Simulators of Turbulent Flows, <i>Google Applied Science</i>	2021
Flexible Transfer in Physical Problem Solving, <i>Google Brain</i>	2021

## TEACHING

Lecturer & Teaching Assistant, <i>Introduction to Robot Intelligence (CSCI-UA 480-072)</i> <i>New York University</i> Department of Computer Science	2023
Teaching Assistant, <i>Seminar in Analysis (18.104)</i> <i>Massachusetts Institute of Technology</i> Department of Mathematics	2021
Teaching Assistant, <i>Computational Cognitive Science (6.804/9.66/9.660)</i> <i>Massachusetts Institute of Technology</i> Department of Computer Science, Department of Brain and Cognitive Sciences	2019

## ADVISING

Carla Garcia Medina (now Research Engineer at <i>Google LLC</i> )	2022-2023
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## SKILLS & EXPERTISE

Training and Fine-tuning Foundation Models (Microsoft DeepSpeed, HuggingFace)  
Machine Learning Workflows (PyTorch, Tensorflow, JAX, SciKitLearn)  
Distributed Reinforcement Learning (moolib, Impala, RLlib)  
Physical Simulators (MuJoCo, PyBullet)  
Differentiable Programming (Julia, JAX, Taichi)

## PROGRAMMING LANGUAGES

Python	Advanced Proficiency
GoLang	Intermediate Proficiency
JavaScript/CSS/HTML	Intermediate Proficiency
Julia	Intermediate Proficiency
MATLAB	Intermediate Proficiency
C/C++	Intermediate Proficiency

## SPOKEN & WRITTEN LANGUAGES

English	Native Proficiency
French	Working Proficiency (DELF B2)
Russian	Native Proficiency
Ukrainian	Limited Working Proficiency

## PROFESSIONAL SERVICE

Representative, <i>MIT Council for Math Majors</i>	2020-2021
Mentor, <i>MIT Undergraduate Society of Women in Math</i>	2019-2021

Mentor, <i>MIT Society of Women Engineers</i>	2019-2021
Volunteer, <i>Rolnick Observatory</i>	2015-2017
Volunteer & Member, <i>Westport Astronomical Society</i>	2015-2017
Contributor, <i>International Occultation Timing Association</i>	2015-2017