ULYANA PITERBARG

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EDUCATION

Ph.D., Computer Science (GPA 3.9/4.0) — 2021 - 2026
Courant Institute of Mathematical Sciences, New York University
Advisors: Prof. Rob Fergus, Prof. Lerrel Pinto

B.S., Mathematics with Computer Science (GPA 4.9/5.0) — 2017 - 2021
Massachusetts Institute of Technology
Advisors: Prof. Joshua Tenenbaum, Prof. Jörn Dunkel

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, Applied Science, *Google LLC* — 2021
Researcher, Ocean Processes, *Climate Modeling Alliance* — 2020-2021
Investment Associate Intern, *Bridgewater Associates LP* — 2020
Software Engineering Intern, Machine Learning Operations, *Spell* — 2019
Technical Assistant, Space Systems and Technology Division, *MIT Lincoln Laboratory* — 2017-2018
Exhibitions Design Intern, *American Museum of Natural History* — 2017

PUBLICATIONS

Piterbarg, U., Pinto, L., & Fergus, R. (2023). `diff` History for long-context language agents. *arXiv preprint arXiv:2312.07540.*

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

Structured Losses for Neural Simulators of Turbulent Flows, *Google Applied Science* — 2021
Flexible Transfer in Physical Problem Solving, *Google Brain* — 2021

TEACHING

Lecturer & Teaching Assistant, *Introduction to Robot Intelligence (CSCI-UA 480-072)* 2023
New York University
Department of Computer Science

Teaching Assistant, *Seminar in Analysis (18.104)* 2021
Massachusetts Institute of Technology
Department of Mathematics

Teaching Assistant, *Computational Cognitive Science (6.804/9.66/9.660)* 2019
Massachusetts Institute of Technology
Department of Computer Science, Department of Brain and Cognitive Sciences

ADVISING

Carla Garcia Medina (now Research Engineer at *Google LLC*) 2022-2023

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, *MIT Council for Math Majors*	2020-2021
Mentor, *MIT Undergraduate Society of Women in Math*	2019-2021
Mentor, *MIT Society of Women Engineers*	2019-2021
Volunteer, *Rolnick Observatory*	2015-2017
Volunteer & Member, *Westport Astronomical Society*	2015-2017
Contributor, *International Occulation Timing Association*	2015-2017