

ULYANA PITERBARG
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EDUCATION

Ph.D., Computer Science (GPA 4.0/4.0) 2021 - 2026
CILVR Lab (Computational Intelligence, Learning, Vision, and Robotics)
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 B. 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, AI Frontiers/GenAI, *Microsoft Research New York* 2024
Ph.D. Research Intern, Applied Science, *Google LLC* 2021
Researcher, Ocean Processes, *Climate Modeling Alliance* 2020-2021
Undergraduate Researcher, *MIT Computational Cognitive Science Group* 2018-2020
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. (2024). Training Language Models on Synthetic Edit Sequences Improves Code Synthesis. *arXiv preprint arXiv:2410.02749*.

Piterbarg, U., Misra, D., & Ash, J. (2024). Rapid Distillation of Reasoning Capability from Black-Box Language Models. (*In Preparation*).

Paglieri, D., Cupiał, B., Coward, S., **Piterbarg, U.**, Wolczyk, M., Khan, A., Pignatelli, E., Kuciński, L., Pinto, L., Fergus, R., Foerster, J., Parker-Holder, J., & Rocktäschel, T. (2024). AgentQuest: Benchmarking LLM and VLM Agents on Long-Horizon Interactive Tasks. (*In Preparation*).

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

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*.

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
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Teaching Assistant, <i>Seminar in Analysis (18.104)</i> <i>Massachusetts Institute of Technology</i> Department of Mathematics	2021
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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
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ADVISING

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

Training and Finetuning LLMs/VLMs (Pytorch FSDP, 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)
Ukrainian	Limited Working Proficiency

PROFESSIONAL SERVICE

Reviewer, <i>Transactions on Machine Learning Research</i>	2024-
Reviewer, <i>International Conference on Learning Representations (ICLR)</i>	2024-
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

REFERENCES

Available upon Request.