Dhruv Sreenivas

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EDUCATION

Mila, Université de Montréal — Montréal, QC
Ph.D. Computer Science — Sep 2024 - Present
GPA: 0.0/0.0 — Advisor: Pablo Samuel Castro

- Relevant courses: Representation Learning (PhD), Probabilistic Graphical Models

Cornell University — Ithaca, NY
M.S. Computer Science — Aug 2021 - Aug 2023
GPA: 4.30/4.0 — Advisors: Wen Sun, Robert Kleinberg

- Teaching assistant for CS 2110, CS 4789, CS 6756 (PhD), CS 6789 (PhD)
- Relevant courses: Advanced Topics in Machine Learning (PhD), Deep Generative Models (PhD), Foundations of Reinforcement Learning (PhD), Machine Learning Theory (PhD), Machine Learning for Feedback Systems (PhD), Advanced Machine Learning Systems (PhD)

B.S. Computer Science, Mathematics — Aug 2018 - May 2021
GPA: 3.66/4.0

PUBLICATIONS & SERVICE

4. ***Optimistic Critics Can Empower Small Actors***
   Olya Mastikhina*, **Dhruv Sreenivas***, Pablo Samuel Castro
   RLC 2025

3. ***Adversarial Imitation Learning via Boosting***
   Jonathan Chang, **Dhruv Sreenivas**, Yingbing Huang, Kianté Brantley, Wen Sun
   ICLR 2024

2. ***Deep Multi-Modal Structural Equations For Causal Effect Estimation With Unstructured Proxies***
   Shachi Deshpande, Kaiwen Wang, **Dhruv Sreenivas**, Zheng Li, Volodymyr Kuleshov
   NeurIPS 2022

1. ***Mitigating Covariate Shift in Imitation Learning via Offline Data Without Great Coverage***
   Jonathan Chang, Masatoshi Uehara, **Dhruv Sreenivas**, Rahul Kidambi, Wen Sun
   NeurIPS 2021

- Reviewer for NeurIPS (2023, 2025), ICLR (2024, 2025), RLC (2025)

ACADEMIC RESEARCH EXPERIENCE

Mila - Quebec AI Institute — Montréal, QC
Graduate Research Assistant — Sep 2024 – Present
- Focusing on developing data-efficient reinforcement learning and imitation learning algorithms, advised by Pablo Samuel Castro
- Co-led a project focusing on mitigating flaws in asymmetric actor-critic settings via making the critic less pessimistic (RLC 2025)
- Currently working on projects focused on off-policy imitation learning and Bayesian reinforcement learning with offline data

Cornell University — Ithaca, NY
Undergraduate/Graduate Researcher — Sep 2020 – Dec 2023
- Worked in Wen Sun's lab, where I assisted on projects focused on (1) joint representation learning for imitation learning in high-dimensional environments (e.g. Atari) and (2) model-based offline imitation learning in state-based, image-based and non-action-based graphics settings (NeurIPS 2021)
- Co-led a project focused on making Discriminator Actor-Critic more principled via gradient boosting methods (ICLR 2024)
- Other non-thesis projects included (1) self-predictive learning for RL in the image-based control context and (2) hybrid learning from preferences, both for RLHF-based and RL-free algorithms
- Assisted another student on a project focusing on using RL to finetune image generative models such as diffusion and consistency models

Mila - Quebec AI Institute — Montréal, QC (remote)
Research Collaborator — Apr 2021 – Mar 2022
- Reinforcement learning research for the LambdaZero project focusing on scaling drug discovery
- Looked into ways to improve exploration in GFlowNets using techniques such as epistemic uncertainty estimation, RND, and asymmetric self-play

INDUSTRY EXPERIENCE

Cohere — New York, NY (remote)
Research Intern — Jun 2024 – Aug 2024
- Worked on LLM post-training, with a focus on improving multistep mathematical reasoning
- Concurrently implemented SOTA preference learning algorithms and improved large language model training infrastructure as part of RL team needs
- Advised by Mohammad Gheshlaghi Azar & Olivier Pietquin

Apple MLR — Cupertino, CA
Research Intern — May 2022 – Sep 2022
- Proposed using simple clustering of subtrajectory representations for offline option learning, advised by Walter Talbott
- Resulting method was shown to be qualitatively much better than other methods at detecting behavioral differences across diverse offline datasets in the pixel-based DeepMind Control Suite, allowing for effective option learning and simpler offline RL
- Implemented Dreamer recurrent world model and image-based discrete CQL in PyTorch, compatible with GPU accelerators and SLURM workload management
- Explored various different techniques for representation learning, including view-based and reconstruction-based methods

- Concurrently studied representation learning for on-policy RL with Riashat Islam & Devon Hjelm

Amazon Web Services Boston, MA
Software Development Engineer Intern Jun 2021 – Aug 2021
- Worked on AWS Boost team, used Pandas and NumPy to (1) aggregate seller data across multiple time periods and (2) develop a performance metric based on available data to rank sellers on the platform
- Performance metric was aimed to be simple to compute, resulting in linear model of different seller attributes that was a suitable ranking
- Integrated performance metric into a new page on the Boost web application with TypeScript

Cornell Cup Robotics Ithaca, NY
Machine Learning Team Member Oct 2020 – May 2021
- Used Haystack API from DeepSet AI to develop scalable Q/A system for R2D2-like robot
- Offloaded all heavy-compute ML systems (∼80% of compute) onto AWS to ease workload for main machine

VMware Inc. Palo Alto, CA (remote)
Data Science Intern Jun 2020 – Aug 2020
- Analyzed in-house device risk score model by comparing with ground-truth security scores across a diverse device dataset
- Constructed random forest models to determine which device features were most indicative of riskiness

SKILLS

Languages: Python, Java, OCaml, C++, C, LaTeX
Libraries/Frameworks: PyTorch, JAX (Haiku, Flax), TensorFlow, NumPy, Pandas, SKLearn, PySpark, OpenCV, Git