Mehran Shakerinava

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EDUCATION		
⋄ **Ph.D. in Computer Science**		2021 – Now
	Mila and McGill University, Montréal, Québec	
	Advised by Siamak Ravanbakhsh	
	GPA: 4/4	
⋄ **M.Sc. in Computer Science**		2020 – 2021
	Mila and McGill University, Montréal, Québec	
	Advised by Siamak Ravanbakhsh	
	Fast-tracked to Ph.D.	
⋄ **B.Sc. in Computer Engineering**		2014 – 2019
	Sharif University of Technology, Tehran, Iran	

RESEARCH INTERESTS

⋄ Design and analysis of machine learning algorithms

⋄ Symmetry and geometry in machine learning and optimization

⋄ Statistical learning theory and theoretical foundations

⋄ Utility theory and reinforcement learning

PUBLICATIONS

⋄ **M. Shakerinava***, M. Sohrabi*, S. Ravanbakhsh, and S. Lacoste-Julien, "Weight-Sharing Regularization." *International Conference on Artificial Intelligence and Statistics (AISTATS)*. PMLR, 2024.

⋄ **M. Shakerinava***, A. K. Mondal*, and S. Ravanbakhsh. "Structuring Representations Using Geometric Invariants." *Advances in Neural Information Processing Systems (NeurIPS)*, 2022.

⋄ **M. Shakerinava**, and S. Ravanbakhsh. "Utility Theory for Sequential Decision Making." *International Conference on Machine Learning (ICML)*. PMLR, 2022.

⋄ **M. Shakerinava**, and S. Ravanbakhsh. "Equivariant networks for pixelized spheres." *International Conference on Machine Learning (ICML)*. PMLR, 2021.

⋄ F. Golshan, M. Bakhshalipour, **M. Shakerinava**, A. Ansari, P. Lotfi-Kamran, and H. Sarbazi-Azad, "Harnessing Pairwise-Correlating Data Prefetching With Runahead Metadata." *Computer Architecture Letters (CAL)*, 2020.

⋄ M. Bakhshalipour, **M. Shakerinava**, P. Lotfi-Kamran, and H. Sarbazi-Azad, "Bingo Spatial Data Prefetcher." *International Symposium on High-Performance Computer Architecture (HPCA)*, 2019.

PREPRINTS

⋄ M. Bakhshalipour, **M. Shakerinava**, F. Golshan, A. Ansari, P. Lotfi-Karman, and H. Sarbazi-Azad, "A Survey on Recent Hardware Data Prefetching Approaches with An Emphasis on Servers." *arXiv preprint arXiv:2009.00715*, 2020.

⋄ A. Mohammad Lavasani, Y. Li, and **M. Shakerinava**, "Newman's theorem via Carathéodory," *arXiv preprint arXiv:2406.08500*, 2024.

HONORS AND AWARDS	◇ Kharusi Family International Science Fellowship *McGill University* Valued at 7500$	2020 – 2021
	◇ **1st Place** (among ~30,000 participants) *Iran's National Master's Entrance Exam* Computer Engineering track, AI/Robotics major	2019
	◇ **2nd and 3rd Place (1st and 2nd Place in Multi-Core Setting)** *The Third Data Prefetching Championship (DPC3) at ISCA 2019*	2019
	◇ **Silver Medal** 21st *Iranian National Olympiad in Informatics*	2012

TEACHING EXPERIENCE	◇ **Organizing Team** *Mathematics Study Group* (Mila Quebec AI Institute) Taught real mathematical analysis and held problem-solving sessions.	2023
	◇ **Teaching Assistant** *Honours Algorithms and Data Structures* (McGill University)	Winter 2024
	Algorithms and Data Structures (McGill University)	Fall 2023
	Theory of Computation (McGill University)	Fall 2022
	Probabilistic Graphical Models (McGill University)	Winter 2022
	Artificial Intelligence (Sharif University of Technology)	Spring 2018, Spring 2019
	Advanced Programming (Sharif University of Technology)	Fall 2016
	◇ **Teacher** *Informatics Olympiad* (NODET High-School) Taught topics on Combinatorics, Graph Theory, Algorithms, and Programming.	2012 – 2015

SKILLS	◇ C/C++, Python, PyTorch, TensorFlow, CUDA, Git, Bash JavaScript, LaTeX

PROFESSIONAL SERVICE	◇ **Reviewer** NeurIPS 2022-2023, ICLR 2024, ICML 2024, AISTATS 2024

REFERENCES	◇ **Siamak Ravanbakhsh (Advisor)** Assistant Professor, School of Computer Science, McGill University `siamak.ravanbakhsh@mcgill.ca`