

Dami Choi

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EDUCATION	University of Toronto 2019 – Present <i>PhD in Computer Science advised by Chris J. Maddison and David Duvenaud</i>
	University of Toronto 2013 – 2018 <i>BASc in Engineering Science (Major in Electrical and Computer Engineering)</i> <ul style="list-style-type: none">Cumulative GPA: 3.91/4.0
RELEVANT EXPERIENCE	Google , Google Research, Translate Team Sep 2022- Feb 2023 <i>Student Researcher</i> <ul style="list-style-type: none">Studied the optimization dynamics of multi-task learning in the data-imbalanced setting.
	Google , Google Research, Brain Team Jun 2018- Jun 2019 <i>AI Resident</i> <ul style="list-style-type: none">Studied <i>data echoing</i>, a method to train neural networks faster in the presence an bottleneck in the input pipeline.Studied common deep learning optimizers, their relationship with each other, and their empirical performance.
	Intel Corporation , Integrated Circuits Department May 2016- Apr 2017 <i>Hardware Engineering Intern</i>
PUBLICATIONS	D. Choi , Y. G. Shavit, D. Duvenaud “Tools for Verifying Proofs-of-Training-Data,” arXiv preprint arXiv:2307.00682.
	D. Choi , D. Xin, J. Gilmer, H. Dadkhahi, A. Garg, O. Firat, C. Yeh, A. M. Dai, B. Ghorbani “Order Matters in the Presence of Dataset Imbalance for Multilingual Learning,” Submitted to <i>Neural Information Processing Systems</i> , 2023.
	M. B. Paulus, D. Choi , D. Tarlow, A. Krause, C. J. Maddison “Gradient Estimation with Stochastic Softmax Tricks,” In <i>Advances in Neural Information Processing Systems 34</i> , 2020 (Oral).
	R. T. Chen, D. Choi , L. Balles, D. Duvenaud, P. Hennig “Self-Tuning Stochastic Optimization with Curvature-Aware Gradient Filtering,” In <i>Workshop on “I Can’t Believe It’s Not Better!”</i> , <i>NeurIPS</i> , 2020.
	D. Choi , C. J. Shallue, Z. Nado, J. Lee, C. J. Maddison, G. E. Dahl “On Empirical Comparisons of Optimizers for Deep Learning,” arXiv preprint arXiv:1910.05446.
	D. Choi , A. Passos, C. J. Shallue, G. E. Dahl “Faster Neural Network Training with Data Echoing,” arXiv preprint arXiv:1907.05550.
	N. Maheswaranathan, L. Metz, G. Tucker, D. Choi , J. Sohl-Dickstein “Guided evolutionary strategies: escaping the curse of dimensionality in random search,” In <i>Proceedings of 36th International Conference on Machine Learning</i> , Long Beach, California, USA, 2019.
W. Grathwohl, D. Choi , Y. Wu, G. Roeder, D. Duvenaud “Backpropagation through the Void: Optimizing control variates for black-box gradient estimation.,” In <i>Proceedings of 6th International Conference on Learning Representations</i> , Vancouver, British Columbia, Canada, 2018.	
AWARDS & SCHOLARSHIPS	▪ Open Phil AI Fellowship 2020 – Present
	▪ NSERC CGS D 2020 – 2023
	▪ Top 10% Reviewer at NeurIPS 2020
	▪ NSERC Undergraduate Student Research Award May 2017 – Aug 2017
	▪ Dean’s Honours List 2013 – 2018 <i>University of Toronto, Faculty of Applied Science and Engineering</i>
INVITED TALKS	▪ Tools for Verifying Neural Models’ Training Data, AI Safety Hub Edinburgh. August 2023
	▪ Gradient Estimation with Stochastic Softmax Tricks, Differentiable Almost Everything: Differentiable Relaxations, Algorithms, Operators, and Simulators at ICML. July 2023
	▪ Backpropagation through the Void: Optimizing control variates for black-box gradient estimation, Endless Summer School session at Vector Institute, Toronto, Canada. March 2018