Martin Klissarov

https://mklissa.github.io | Google Scholar | martin.klissarov@mail.mcgill.ca

EDUCATION

MCGILL UNIVERSITY

PhD in Computer Science
2020 - now
Supervisor: Dr. Doina Precup
Cum. GPA: 4.0 / 4.0

MSc in Computer Science
2018 - 2020
Supervisor: Dr. Doina Precup
Cum. GPA: 4.0 / 4.0

POLYTECHNIQUE MONTRÉAL

BEng in Electrical Engineering
2014 - 2017
Cum. GPA: 3.9 / 4.0

COURSEWORK

GRADUATE

Reinforcement Learning
Deep Learning
Stochastic Approximation
Variational Inference
Machine Learning

UNDERGRADUATE

Algorithms and Data Structures
Object-Oriented Programming
Probability and Statistics
Linear Algebra
Signal Processing

SKILLS

SOFTWARE

TensorFlow • PyTorch • Theano • MXNet • Numpy • Python • MATLAB • Bash • C++ • Java

LANGUAGES

English	Fluent
French	Fluent
Bulgarian	Native
Mandarin	Intermediate

CITIZENSHIPS

Canadian
EU (No visa required to work)

EXPERIENCE

AMAZON AWS Applied Scientist Intern

Supervisor: Simon Corston-Oliver
May 2018 - Sep 2018

- Implemented various state-of-the-art CNN architectures, specifically for a distributed training setting and published blogpost detailing the experiments
- Explored the relationship between the size of mini-batches and how they affect generalization
- Set a new record for fastest convergence to 94% on CIFAR-10 on single GPU

REASONING AND LEARNING LAB, MCGILL

Reinforcement Learning Research Intern
Supervisor: Doina Precup
May 2017 - Jan 2018

- Pursued research on how to overcome option degeneration in the Option Critic architecture.
- Implemented the Option-Critic architecture on various algorithms such as A3C, DDPG, and PPO.
- Built customized MuJoCo environments that show explicit compositionality, showcasing it's importance in hierarchical reinforcement learning

PUBLICATIONS

- **Martin Klissarov** and Doina Precup. "Reward Propagation Using Graph Convolutional Networks", *NeurIPS*, 2020 (Spotlight)
- Khimya Ketharpal, **Martin Klissarov**, Maxime Chevalier-Boisvert, Pierre-Luc Bacon and Doina Precup. "Options of Interest: Temporal Abstraction with Interest Functions", *AAAI*, 2020
- **Martin Klissarov**, Riashat Islam, Khimya Khetarpal and Doina Precup. "Variational State Encoding as Insintric Motivation in Reinforcement Learning", *RLDM* , 2019
- **Martin Klissarov** and Doina Precup. "Diffusion-based Approximate Value Functions", *ICML* Workshop on Efficient Credit Assignment (Oral), 2018
- Jean Harb, Pierre-Luc Bacon, **Martin Klissarov** and Doina Precup. "When Waiting is not an Option: Learning Options with a Deliberation Cost", *AAAI*, 2018
- **Martin Klissarov**, Pierre-Luc Bacon, Jean Harb and Doina Precup. "Learning Options End-to-End for Continuous Actions Tasks ", *NIPS* Workshop on Hierarchical Reinforcement Learning, 2017

AWARDS

May 2020	NSERC Alexander Graham Bell Scholarship	(35000$/y)
May 2018	McGill Graduate Excellence Scholarship	(4000$/y)
May 2018	FRQNT Masters Degree in Natural Science Scholarship	(17500$/y)
June 2017	IVADO Undergraduate Research Scholarship	(5000$)
February 2017	Ordre des Ingénieurs Foundation Excellence Scholarship	(3000$)
May 2016	NSERC Undergraduate Student Research Award (USRA)	(8000$)
March 2015	J.W. McConnell Family Excellence Scholarship	(5000$)