

Rémi Le Priol

PhD Candidate - June 12, 2020

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Publications and Pre-prints

- 2020 **An Analysis of the Adaptation Speed of Causal Models**, RLP, Reza Babanezhad Harikandeh, Yoshua Bengio, Simon Lacoste-Julien, ArXiv preprint.
- 2020 **Out-of-Distribution Generalization via Risk Extrapolation (REx)**, David Krueger, Ethan Caballero, Joern-Henrik Jacobsen, Amy Zhang, Jonathan Binas, RLP, Aaron Courville, ArXiv preprint.
- 2018 **Negative Momentum for Improved Game Dynamics**, Gauthier Gidel, Reyhane Askari Hemmat, Mohammad Pezeshki, Gabriel Huang, RLP, Simon Lacoste-Julien, Ioannis Mitliagkas, AISTATS 2019.
- 2018 **Adaptive Stochastic Dual Coordinate Ascent for Conditional Random Fields**, RLP, Alexandre Piché, Simon Lacoste-Julien, UAI 2018.
- 2017 **Massively parallel processing of whole genome sequence data: an in-depth performance study**, Abhishek Roy, Yanlei Diao, Uday Evani, Avinash Abhyankar, Clinton Howarth, RLP, Toby Bloom, ACM SIGMOD 2017.

Internships

- Summer 2019 **Invariance, Causality and Domain Adaptation**, FAIR, New York.
Part 1 : looking for an unsupervised analog of the Invariant Risk Minimization principle. Part 2 : investigating adaptive capacity control via local regularization in the context of importance sampling for domain adaptation. Supervision by Leon Bottou.
- Summer - Fall 2017 **Optimization for Structured Prediction**, Mila, Université de Montréal.
Application of the variance reduced optimization algorithm SDCA to structured prediction models. Supervision by Simon Lacoste-Julien, who then became my PhD advisor.
- Summer 2016 **Distributed Genome Sequencing**, New York Genome Center.
Analysis of the randomness in the first step of the sequencing pipeline. Supervision by Avinash Abhyankar, Toby Bloom and Yanlei Diao.

Education

- 2018–Present **Ph.D. Candidate in Computer Science**, Mila, Université de Montréal.
Doing research in optimization, learning theory and causality with the supervision of Simon Lacoste-Julien and Yoshua Bengio.

- 2016–2017 **M.Sc. with honors in Maths and Machine Learning**, *ENS Cachan*.
M2 Mathématiques, Vision, Apprentissage (MVA) is France's top master for research in computer vision and machine learning. I learned about convex optimization, graphical models, kernel methods, bandits, the use of sparsity and differential geometry in image processing
- 2013–2017 **Engineering degree and M1 in Applied Maths**, *École polytechnique*.
Leading French school for high-level multidisciplinary scientific studies. I learned a lot about Physics (Quantum, Relativity, Statistical), Mathematics both pure (Complex Analysis, Measure theory, Galois theory) and applied (probabilities, statistics, Markov sequences, signal processing, learning theory), and Computer Science (algorithmics, complexity theory, randomization, data science).
- 2011–2013 **Preparatory Class**, *Lycée Hoche*, Versailles.
Two-year intensive programme in Mathematics, Physics and Informatics (MPI) in preparation for competitive exams to the French Grandes Écoles. National exam results: ranked 26th at ENS and 57th at Polytechnique.
- 2011 **Baccalauréat in Science with highest honors**, *Lycée Rabelais*, Meudon.

Other Experiences

- Fall 2019 **Head Teaching Assistant**, *Université de Montréal*.
Responsible for the organization and the content of all lab sessions, and the creation of an automated code exam. For the class Fundamentals of Machine Learning, with professors Ioannis Mitliagkas and Guillaume Rabusseau.
- Fall 2018 **Teaching Assistant**, *Université de Montréal*.
Teach and create content for lab sessions. For the class Fundamentals of Machine Learning, with professors Ioannis Mitliagkas and Guillaume Rabusseau.
- 2018 **Lab Rep**, *Mila*.
Represent student's interests within Mila. Making sure the important information are accessible to all students and newcomers, in particular about mental health support.
- Summer 2015 **Programmer**, *Crédit Agricole CIB – Nonlinear Trading Desk*, Tokyo.
Developped a software to simulate exotic product's price evolution against past events to help traders develop safer strategies.
- Winter 2014 **Lieutenant**, *Special Military Service Regiment*, La Réunion Island.
1) Supervised the military recruit training of 30 disadvantaged young adults, helping them to get ready for the job market. 2) Consulting missions to shape the future training programs offered by the Regiment.
- Fall 2013 **Military Training**, *Écoles de Saint-Cyr*, Coëtquidan.
Condensed training to become an officer in the French Ground Forces

Languages

- Programming Python scientific stack, Pytorch.
- Natural French (native speaker) and English (fluent)