Gaël Letarte

Education

2019–...   **Ph.D. in Computer Science**.
Université Laval, Quebec.

2018–2019   **M.Sc. in Computer Science**.
Université Laval, Quebec. GPA: 4.33/4.33

2015–2018   **B.Sc. with Honors in Mathematics and Computer Science**.
Université Laval, Quebec. GPA: 4.16/4.33

Professional experience

2019–   **Data Scientist**, *Baseline*, Quebec.
Founding member of Baseline, a cooperative specialized in data science consultation.

2018–2019   **Applied Research Scientist**, *InVivo AI*, Montreal.
Research and develop machine learning solutions to streamline small molecule R&D.

Fall 2018   **Research Intern**, *Inria*, Lille.
PAC-Bayesian theory for random Fourier features and neural networks.

2016–2018   **Research Assistant**, *GRAAL Research Lab, Université Laval*, Quebec.
Participate in machine learning and computational biology research.

Summer 2017   **Research Intern in Machine Learning**, *CerebriAI*, Toronto.
Deep reinforcement learning on real-time entreprise data.

Summer 2016   **Research Intern**, *GRAAL Research Lab, Université Laval*, Quebec.
Design, implement and run machine learning algorithms on genomic data.

Peer-Reviewed Publications

2019   **Dichotomize and Generalize: PAC-Bayesian Binary Activated Deep Neural Networks**, Gaël Letarte, Pascal Germain, Benjamin Guedj, François Laviolette, *NeurIPS*.

2019   **Pseudo-Bayesian Learning with Kernel Fourier Transform as Prior**, Gaël Letarte, Emilie Morvant, Pascal Germain, *AISTATS*.

2019   **Interpretable genotype-to-phenotype classifiers with performance guarantees**, Alexandre Drouin, Gaël Letarte, Frédéric Raymond, Mario Marchand, Jacques Corbeil, François Laviolette, *Scientific Reports*, 9(1), p.4071.

2018   **Importance of Self-Attention for Sentiment Analysis**, Gaël Letarte, Frédérik Paradis, Philippe Giguère, François Laviolette, *BlackboxNLP, EMNLP*.

2016   **Large scale modeling of antimicrobial resistance with interpretable classifiers**, Alexandre Drouin, Frédéric Raymond, Gaël Letarte, Mario Marchand, Jacques Corbeil, François Laviolette, *Machine Learning for Health Workshop, NIPS*.

Grants and Scholarships

2019–2022	**Natural Sciences and Engineering Research Council of Canada**. Alexander Graham Bell Canada Doctoral Scholarship
2019–2020	**Fonds de recherche du Québec - Nature et technologies**. B1 Masters Research Award
Fall 2018	**Mitacs**. Globalink Research Award
2018–2019	**Natural Sciences and Engineering Research Council of Canada**. Alexander Graham Bell Canada Masters Scholarship
Summer 2017	**The Fields Institute for Research in Mathematical Sciences**. Fields Undergraduate Summer Research Program
Summer 2016	**Natural Sciences and Engineering Research Council of Canada**. Undergraduate Student Research Award

Applications

2016	**Kover**, *Languages: Python & C++* , http://github.com/aldro61/kover. Tool allowing to learn interpretable computational phenotyping models from k-merized genomic data.

Awards

2016-2017	**Honors Roll**, *Department of Mathematics and Satistics*, Université Laval.
2017	**Yves-Roy Award**, *Best Oriented-Object Project*. Member of the winning team
2015-2016	**Honors Roll**, *Department of Mathematics and Satistics*, Université Laval.

Languages

- Bilingual french/english
- Basic knowledge of German

Programming skills

- C/C++
- Python
- PyTorch
- Scikit-Learn
- LaTeX
- AWS

Interests

- Machine Learning
- Parallel programming
- Big Data
- Algorithms
- Robotics
- Software Development
- Computational Biology
- Mathematics