

Blair Bilodeau

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DEGREES

2023 Ph.D. Statistical Sciences, University of Toronto
2018 H.B.Sc. Financial Modelling, University of Western Ontario

EMPLOYMENT

2023– **The Voleon Group**, *Member of Research Staff*
• Developing systematic investment strategies using modern statistical learning.
2022 **Google Brain**, *Research Intern*
• Led research on statistical theory for interpretable machine learning.
2018–23 **University of Toronto & Vector Institute**, *Ph.D. Candidate*
• Led research on minimax statistical theory and sequential decision making.
• Winter 2022 at the Simons Institute for the Theory of Computing.
• Winter 2020 at the Institute for Advanced Study.
2017–18 **University of Western Ontario**, *Undergraduate Researcher*
• Led research on queueing theory with health care applications.
2016 **London Life**, *Risk Research Intern*
2015 **Bell Canada**, *Data Analyst Intern*

SELECTED HONOURS AND AWARDS

2023 D. A. S. Fraser Doctoral Thesis Award
2023–25 NSERC Postdoctoral Fellowship (*Declined*)
2022 University of Chicago Rising Star in Data Science
2021 Institute of Mathematical Statistics Hannan Graduate Student Award
2020 New York Academy of Sciences Machine Learning Symposium Best Poster Award
2020 NSERC Michael Smith Foreign Study Supplement
2018–22 NSERC Alexander Graham Bell Canada Graduate Scholarship (Doctoral & Master's)
2018–19 Queen Elizabeth II Graduate Scholarship in Science and Technology (*Declined*)
2017–18 NSERC Undergraduate Student Research Award (x2)

SELECTED PUBLICATIONS

*Shared first authorship; ^(A)Alphabetical

B. Bilodeau, N. Jaques, P. W. Koh, B. Kim. (2024). Impossibility Theorems for Feature Attribution. **Proceedings of the National Academy of Sciences**.

***B. Bilodeau**, *J. Negrea, D. M. Roy. (2023). Relaxing the I.I.D. Assumption: Adaptively Minimax Optimal Regret via Root-Entropic Regularization. **Annals of Statistics**.

B. Bilodeau, D. J. Foster, D. M. Roy. (2023). Minimax Rates for Conditional Density Estimation via Empirical Entropy. **Annals of Statistics**.

^(A)**B. Bilodeau**, A. Stringer, Y. Tang. (2022). Stochastic Convergence Rates and Applications of Adaptive Quadrature in Bayesian Inference. **Journal of the American Statistical Association**.

B. Bilodeau, L. Wang, D. M. Roy. (2022). Adaptively Exploiting d -Separators with Causal Bandits. **Neural Information Processing Systems (Oral)**.

B. Bilodeau, D. J. Foster, D. M. Roy. (2020). Tight Bounds on Minimax Regret Under Logarithmic Loss via Self-Concordance. **International Conference on Machine Learning**.

ADDITIONAL ACADEMIC EXPERIENCE

- Invited academic talks at McGill, Simon Fraser, Alberta, Michigan, Waterloo, CMStats, Carnegie Mellon, CREST, DeepMind, UCLA, MIT, RIKEN.
- Course instructor for undergraduate probability theory. TA for various undergraduate statistics courses.
- Referee for top machine learning conferences and statistics journals (awards: NeurIPS, AISTATS, UAI).