Blair Laurence Bilodeau

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Education

PhD, Statistics – GPA: 3.96 / 4.00   2018 – 2023
University of Toronto, Toronto, Canada
Supervisor: Dr. Daniel Roy

Honours BSc, Financial Modelling and Mathematics – GPA: 3.97 / 4.00   2014 – 2018
Western University, London, Canada

Research Grants

NSERC Postgraduate Scholarships – Doctoral: $63,000   2019 – 2022
NSERC Canada Graduate Scholarships – Master's: $17,500   2018 – 2019
Queen Elizabeth II Graduate Scholarship: $15,000 (Declined)   2018 – 2019
NSERC Undergraduate Student Research Award: $4,500   2018
NSERC Undergraduate Student Research Award: $4,500   2017

Research Experience

Doctoral Researcher   Jan 2019 – Present
University of Toronto, Toronto, Canada
Supervisor: Dr. Daniel Roy
  - Working to bridge the gap between generalization bounds for algorithms on IID data and regret bounds for online learning algorithms. Towards this, I hope to develop a notion of model fit as a prior for the regret experienced.

Undergraduate Researcher   May 2018 – Aug 2018
Western University, London, Canada
Supervisor: Dr. David Stanford
  - Derived the Laplace-Stieltjes transform of the Maximum Priority Process for the Accumulating Priority Queue, as well as the average waiting time for both classes in the Delayed APQ. Made progress on deriving the waiting time distribution for the high priority customers in the Delayed APQ.

Undergraduate Researcher   May 2017 – Aug 2017
Western University, London, Canada
Supervisor: Dr. David Stanford
  - Developed a Python simulation model of the internal medicine ward at London's University Hospital to study physician-nurse collaboration efficiency, and proposed two novel changes which are to be implemented in a trial by the hospital.

Refereed Publications

B.L. Bilodeau, D.A. Stanford, M. Goldszmidt, A. Appleton. (2019). *Simulated co-location of patients admitted to an inpatient internal medicine teaching unit: Potential impacts on efficiency and physician-nurse collaboration.* Accepted to INFOR: Information Systems and Operational Research. To appear at doi: 10.1080/03155986.2019.1624475.

Conference Presentations

SOGMSC, Guelph, Canada. Oral.   June 2019
The average waiting time for both classes in a delayed Accumulating Priority Queue.

CORS, Saskatoon, Canada. Oral.   May 2019
The average waiting time for both classes in a delayed Accumulating Priority Queue.

CanQueue, Edmonton, Canada. Oral.   August 2018
Simulated co-location of patients admitted to an inpatient internal medicine teaching unit.

ORAHS, Oslo, Norway. Oral.   July 2018
Simulated co-location of patients admitted to an inpatient internal medicine teaching unit.

Working Papers

B.L. Bilodeau, D.A. Stanford. (2019). *The average waiting time for both classes in a delayed Accumulating Priority Queue.*

Professional Experience

Risk Research Intern   May 2016 – Aug 2016
London Life Insurance Company, London, Canada
- Performed statistical analysis for a major mortality study on life-contingent annuities.

Data Analyst Intern   May 2015 – Aug 2015
Bell Canada, London, Canada
- Built a model to predict construction milestones from historical data for financial planning purposes.

Level 3 Ice Hockey Referee   Sep 2010 – Apr 2017
Ontario Hockey Federation, London, Canada

Teaching Experience

Teaching Assistant
University of Toronto, Toronto, Canada
- STA261: Probability and Statistics II   Summer 2019
- STA457: Time Series Analysis   Spring 2019
- STA355: Theory of Statistical Practice   Spring 2019
- STA347: Probability Theory   Fall 2018
- ACT230: Mathematics of Finance for Non-Actuaries   Fall 2018

Scholarships and Awards

E.F. Burton and F.W. Burton Graduate Scholarship: $3,000   2018
Robert and Ruth Lumsden Scholarships in Science: $1,500   2017
Borwein Memorial Prize: $100   2017
Western University Continuing Admission Scholarship: $10,000   2014 – 2018