Emmett Borg B.Math, M.Eng

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Skills Summary

Technical	Python, SQL, R, Excel, VBA, AnyLogic, Simio
Methods	Simulation, Time-series Forecasting, Data Visualization, Machine Learning

Work Experience

Cancer Care Ontario
Data Scientist (formerly Senior Analyst) June 2018 – present

- Built a time-series forecasting tool to support budgeting recommendations and trend visualization for cancer drug reimbursement.
- Created a simulation model for MRI and CT services in Ontario, allowing decision makers to evaluate the impact of funding allocation and scheduling policies on patient wait times across the province.
- Implemented string-distance algorithms to analyze concordance between observed cancer patient pathways and clinically ideal pathways, and how it relates to survival.
- Predicted Emergency Room wait times using system state and streaming arrival data to support live reporting initiative in Ontario.
- Supported multiple large scale research data requests, including de-identification, cleaning, and QA.

RBC Global Asset Management
Competitive Intelligence Analyst Sept 2016–Dec 2017

- Researched competitor firms and products in the Canadian retail mutual fund and exchange-traded fund segments.
- Produced written reports for distribution to over 3000 investment advisors across RBC.
- Built a portfolio review tool to analyze historical performance and risk metrics.
- Designed, automated, and managed all regular reporting with Excel VBA.

Education

Master of Engineering
University of Toronto 2018

- Major in Operations Research in the Department of Mechanical and Industrial Engineering
- Coursework in: Data Science, Simulation, Monte Carlo Methods, Healthcare Engineering, Linear Optimization
- Project: Simulating Mortality in a Mass Casualty Event

Bachelor of Mathematics
University of Waterloo 2017

- Business Administration specialization (Honours), Co-operative Program
- Computer Science minor

Publications and Presentations

- Murray, P; Shalaby, Y; Ieraci, L; Sniekers, D; Borg, E; Esensoy, AV; Arias, J. (2019). Forecasting Ontario Oncology Drug Expenditures: A Hybrid Approach to Improving Accuracy. Applied Health Economics and Health Policy,
- Borg, E; Vahid, S. (2019). Time-Series Forecasting for Health System Planning in Ontario. Guest lecture for MHSc course at University of Toronto.
- Borg, E; Sarhangian, V. (2018). Simulating Mortality in a Mass Casualty Event - Hands-on Workshop. Presented at the American Society for Emergency Radiology Annual Meeting.