Jonathan Lorraine

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Citizenship: Canadian/U.S

Professional Experience

2016-Current **Data Scientist, Electronica AI**
Responsible for designing, optimizing, validating, and executing trading strategies. Used machine learning techniques to find strategy parameters which perform well on unseen data, leading to several funds that are actively trading. Internship component of the MScAC program, with an academic advisor of Professor David Duvenaud and industry advisor of Aristotle Andrulakis.

2016-2017 **Teaching Assistant, University Of Toronto**
Responsible for grading and leading tutorials in Mathematical Expressions and Reasoning for Computer Science.

2014-2016 **Research Assistant, University Of Toronto**
Worked with Statistics and Operations Research professor Dmitry Krass to generate computational results for publications.

2013-2014 **Mobile Application Developer, First Class Education Software**
Developed an application for teaching university level biology on Android and iOS.

Education

2012-2016 **B.Sc., University of Toronto**
Specialist in Computer Science, major in Mathematics, and a minor in Economics. Graduated with high distinction.

2016-2017 **M.Sc. in Applied Computing, University of Toronto**
Specialist in Data Science. Academic advisor was Professor David Duvenaud and industry advisor was Aristotle Andrulakis.

Publications

2017 Lorraine, J., Duvenaud, D. **Stochastic Hyperparameter Optimization through Hypernets**
Designed an algorithm to learn a differentiable loss function for hyperparameters, which can scale to thousands of dimensions. Accepted at NIPS 2017 meta-learning workshop, and submitted as an ICML 2018 conference paper.

Other Research Experience

2014-2016 Krass, D., Suzuki, A. **Maximizing the Trading Area of a new Facility**

Designed an algorithm for finding a point to add a Voronoi diagram, with a Voronoi cell that has maximal area. Work was completed as a research internship and supported by NSERC.

2016 Aboolian, R., Berman, O., Krass, D. **Optimizing Facility Location and Design**
Responsible for implementing an approximation scheme to a non-linear concave knapsack problem. Work was completed as a research internship.

2015 Krass, D., Berman, O., Kalcsics, J. **On Covering Location Problems on Networks with Edge Demand**
Responsible for finding numerical solutions to a maximum covering problem on a network with edge-based demand. Work was completed as a research internship.

Grants & Awards

2017 MITACS Accelerate Research Grant: $30,000
2014 NSERC Undergraduate Research Award: $4,500
2012-2013 GE-STAR Award: $ 4,500

Last updated: March 2, 2018