# Darrell Aucoin

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# Objective

To further develop my machine learning knowledge, devise new machine learning models and implement them.

## **Executive Summary**

- Prospective Data Scientist with Masters Degree in Applied Computing and Bachelor degree in Statistics and Computational Math with experience in R, Python, SQL, Apache Spark, and C++
- Knowledge of a wide variety of machine learning and statistical models learned though Masters Degree in Applied Computing and B. Math in Statistics and Computational Math
- Demonstrated leadership and management skills as President of Statistics Club for 2 years
- Passion for communicating ideas and concepts via presentations/tutorials for the UW Statistics Club as well as national conferences

#### **Data Science Skills**

Modelling: Studied various machine learning and statistical models through Masters in Applied Computing and Bachelor of Math in Statistics. I also created various models for Datalogue.

**Data Wrangling:** Cleaned data related to projects using SQL, Spark, R and Python.

**Communication:** Made various presentations to classes, clubs, and conferences.

**Visualization:** Taken a statistics course on Data Visualization.

**Programming:** Experienced in various data analytics programming languages: R, Python, Matlab, and Apache Spark.

**Technology:** Built a small Hadoop cluster using single board computers.

### Relevant Work Experience

 Machine Learning Researcher, Interdata Laboratories (Datalogue), Montreal, QC.
 Research, train, deploy Machine Learning models to help automatically prepare data May 2017-Aug 2018

- Designed and Implimented a segmentation machine learning model that breaks a string into it's com-
- Created models on anomaly detection for text columnar data, working with noisy data, and classifying whole columns of data

Software Adviser, Statistical Consulting Centre, University of Waterloo, Waterloo, ON.
Provided software advice on R, SQL, and SPSS for graduate students

#### Education

# Master of Science in Applied Computing, Data Science Concentration • University of Toronto, Toronto, Ontario.

Relevant Courses: Topics in ML: Interference & Generative Models, Algorithms for Genome Sequence Analysis, Probabilistic Learning and Reasoning, Fundamentals of Statistical Genetics

Bachelor of Mathematics with Major in Statistics and Computational Math with CS Minor • University of Waterloo, Waterloo, Ontario.

Relevant Courses: Inference for Big Data, Classification (Machine Learning), Data Visualisation, Function Estimation, Data Types (Python), Object-Orientated Programming (C++), Databases (SQL), Spatial Data Analysis, Longitudinal Data Analysis, Computational Linear Algebra

#### **Research Experience**

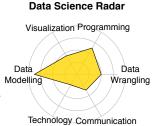
**Undergraduate Research Assistant**, Shoja'eddin Chenouri: University of Waterloo.

• Worked with Apache Spark on various data projects

Undergraduate Research Assistant, Shoja'eddin Chenouri: University of Waterloo.Investigated and wrote supplementary material on various Big Data Tools

May-Aug 2014

May-Aug 2015



2015

2018

2015

Projects and Extracurricular Activities	
<ul> <li>Missing Data Imputation Using Gaussian Mixtures: Investigated MCMC gaussian mixture models for imputation.</li> <li>CSC 2541: Differentiable Inference and Generative Models Project</li> </ul>	or data 2016
Review of Genotype Imputation Algorithms: Compared various genotype imputation algorithms.  • CSC 2417H: Algorithms for Genome Sequence Analysis Project	2016
Statistics Club President, University of Waterloo  ■ Lead a team in providing various statistics related educational and social activities for fellow stud	014-15 lents.
Executive Evaluation Committee Member, MathSoc, University of Waterloo  ■ Evaluated MathSoc executives and provided constructive criticisms and recommendations	ll 2015
<ul> <li>Small Hadoop Cluster: Created a small Hadoop cluster using single board computers. Marked by the Math Endowment Fund (MEF).</li> <li>Determine Influence in Social Media: Ranked Twitter users using machine learning algorithms</li> <li>Stat 441: Classification Project</li> </ul>	y 2015 2014
Honours and Awards	
NSERC Undergraduate Student Research Award: Natural Sciences and Engineering Research Council of Canada  • Received 2 awards for work underneath a supervisor at University of Waterloo (see Research Experience)	2015
<ul> <li>Winston and Diana Cherry Award in Statistics: University of Waterloo.</li> <li>For highest mark of 98 in a statistics course (Computational Inference)</li> </ul>	2013
<ul> <li>Jason Lang Scholarship: Student Aid Alberta.</li> <li>For outstanding academic achievements in undergraduate studies</li> </ul>	2012
Dean's List: University of Alberta.	2012
Honourable Mention: MCM: The Mathematical Contest in Modelling.  Academic Conferences	2012
<ul> <li>PyCon Canada: Toronto, Canada</li> <li>Python conference on various topics: new features for python, neural networks, etc</li> </ul>	2016
Big Data Phenotyping: Opportunities, Analytic Challenges, and Solutions: Toronto, Canada  ● Conference on various issues related to big data and health research	2016
<ul> <li>SORA/TABA Annual Workshop 2016 and DLSPH Biostatistics Research Day: University of Toronto.</li> <li>Workshop on causal inference in observational studies</li> </ul>	2016
<ul> <li>Undergraduate Research Opportunities Conference (UROC 2015): University of Waterloo.</li> <li>Performed analytics on protein data as part of a 3-person team</li> </ul>	2015
<ul> <li>Canadian Undergraduate Mathematics Conference (CUMC 2015): University of Alberta.</li> <li>Presented a talk on MapReduce and the basics of distributed computing</li> </ul>	2015
Canadian Undergraduate Mathematics Conference (CUMC 2014): University of Carlton.  Presentations	2014
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CUMC 2015: MapReduce and the basics of distributed computing.  Canadian Undergraduate Mathematics Conference, University of Alberta.	2015
<b>Big Data Concepts &amp; Tools</b> : MapReduce, the basics of distributed computing and some big data tools. Statistics Club, University of Waterloo.	2015
Intro to Hadoop: MapReduce and basic overview of commands for Hadoop. Statistics Club, University of Waterloo.	2015