

JORDAN BELL

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jordanbell.info

PROFILE

Experienced **Data Scientist** with a Master of Science in Mathematics, and experience in end-to-end model development including ETL, data cleansing, feature engineering and feature selection, model training, validation, and production pipeline building. Especially strong command of time series data and geospatial data. Produce top quality visualizations, summarize actionable descriptive statistics, with experience developing both supervised learning predictive models and unsupervised learning cluster models. Extremely strong command line and systems administration experience, troubleshooting technical problems for myself and colleagues.

Data Discovery

Geospatial Data Analysis

Data Mining

Creating Documentation

Linear Regression

Descriptive Statistics

Time Series Analysis

Optimization

Machine Learning

Languages: SQL (Hive, Impala, Spark, and BigQuery). Python. SAS. Excel/Google Sheets. KNIME (and other data analysis suites). Linux Bash for text processing with regular expressions and scripting for command line automation.

Software/Platforms: Git (CLI and SourceTree), HDFS (Hadoop), Google BigQuery, Google Analytics, Amazon S3, Microsoft Azure, Atlassian Jira and Confluence, Databricks Spark, Cloudera Hive and Impala.

Python mastery: **1.** numpy. **2.** pandas. **3.** Matplotlib. **4.** scikit-learn (linear and logistic regression). **5.** Object oriented programming in Python. **6.** re (text manipulation). **7.** Vector and raster geospatial data manipulation and visualization (PyShp, Shapely, GeoPandas, Rasterio, etc.)

PROFESSIONAL EXPERIENCE

Data Science Associate, Canadian Tire, Toronto

June 2022 – Present

- Efficiently create data driven solutions using techniques like regression analysis, regularization, SARIMAX to build out complex models.
- Blended pure data science methods with business insights to satisfy stakeholders and gain traction for these solutions, while adhering to high standards of statistical rigour.
- Member of team building operational system for optimization product placement according to constraints, using mixed integer programming (MIP) to generate plans for aisles that are organic and based on store data. optimization for product placement on shelves according to constraints, using mixed integer programming (MIP).
- Language of the project is Python using COIN-OR, PuLP, and Pyomo.
- Developed store similarity metrics to answer questions like “What stores are most similar to mine in folding chair sales?”, or generally “What stores are most similar to mine?”
- Initiated building pipeline from Google Analytics for page views of products, for potential use with store similarity metrics
- Collaborate using Bitbucket and Jira for projects, and Microsoft Teams for communications

Data Science Intern, Consilium Crypto, Toronto

Jan 2019 – April 2019

- Tested logistic regression models with feature selection for time series predictions. Produced top level quality visualizations. Used time series data from both blockchain and from exchange price and volume.
- All work done in Python, using pandas for data transformation, scikit-learn for logistic regression and Plotly for visualization.

Self-Directed Projects, <https://jordanbell.info/notebooks/> Toronto 2018 - Present

- Transform and visualize public datasets of geospatial and time series data.
- Build analytical visualizations using Python

ADDITIONAL EXPERIENCE

Mentored secondary and post-secondary students. Designed syllabus and developed and delivered lectures to post-secondary students. Prepared assignments and exams. Certified and graded work providing actionable feedback to strengthen students' skills and knowledge.

Developed flexible communication skills to discuss technical materials and concepts in a manner that was approachable for non-technical students.

Mathematics Tutor, Jordan Bell Tutoring, Toronto Jan 2021 – June 2022

Mathematics Tutor, Toronto Elite Tutorial Services, Toronto March 2018 – Jan 2021

Mathematics Course Instructor, University of Toronto, Toronto Apr 2013 - Apr 2017

EDUCATION

Graduate Certificate, Analytics for Business Decision Making, George Brown College, Toronto 2019
Courses in program used SAS

Master of Science, Department of Mathematics, University of Toronto, Toronto 2009
Canada Graduate Scholarships, Master's (CGS M)

Bachelor of Mathematics, Mathematics, Carleton University, Ottawa 2007
University Medal in Mathematics

SELECTED PUBLICATIONS

2019 recipient of Carl B. Allendoerfer Award for expository mathematical writing, Mathematical Association of America (MAA) for Jordan Bell and Viktor Blåsjö, "Pietro Mengoli's 1650 Proof that the Harmonic Series Diverges", *Mathematics Magazine*, vol. 91, no. 5, December 2018, 341-347. <https://doi.org/10.1080/0025570X.2018.1506656>

Bell, Jordan. "Estimates for the Norms of Products of Sines and Cosines." *Journal of Mathematical Analysis and Applications* 405, no. 2 (2013): 530–45. <https://doi.org/10.1016/j.jmaa.2013.04.010>

Bell, Jordan. "Cyclotomic Orthomorphisms of Finite Fields." *Discrete Applied Mathematics* 161, no. 1–2 (2013): 294–300. <https://doi.org/10.1016/j.dam.2012.08.013>

Andrews, George E., and Jordan Bell. "Euler's Pentagonal Number Theorem and the Rogers-Fine Identity." *Annals of Combinatorics* 16, no. 3 (2012): 411–20. <https://doi.org/10.1007/s00026-012-0139-4>

Bell, Jordan. "A Summary of Euler's Work on the Pentagonal Number Theorem." *Archive for History of Exact Sciences* 64, no. 3 (2010): 301–73. <https://doi.org/10.1007/s00407-010-0057-y>

Bell, Jordan, and Brett Stevens. "A Survey of Known Results and Research Areas for n -Queens." *Discrete Mathematics* 309, no. 1 (2009): 1–31. <https://doi.org/10.1016/j.disc.2007.12.043>