Jordan Bell

Toronto, Ontario | (416) 528-3258

jordan.bell@gmail.com | LinkedIn | Website | GitHub

Data Scientist

Experienced Data Scientist with a Master of Science in Mathematics, specializing in geospatial and time series data analysis and operational SQL data pipeline development. Exceptional at producing top-quality visualizations, descriptive statistics, supervised learning predictive models, unsupervised learning cluster models, and time series analysis and forecasting. Solid command line and systems administration experience.

Key Skills

Documentation and Testing | SQL Data Pipeline Development | Information Systems Data Modeling | Time Series Analysis | Geospatial Data Analysis | Text Data Analytics | Discrete Optimization | Feature Engineering

Languages

SQL (Hive, Impala, Spark, BigQuery, Oracle Database) | Python | SAS | JavaScript | HTML, CSS, Markdown, Liquid, LaTeX | CLI for HDFS, Amazon S3, Google Cloud Storage, Azure Cloud Storage | Expert Linux Bash/CLI for robust advanced text processing (sed/awk), document conversion (Pandoc), and image manipulation (Gnuplot, ImageMagick, Ghostscript, FFmpeg)

Software

Excel/Google Sheets, KNIME (and other data analysis suites), QGIS/ArcGIS, OBS Studio (video screen capture), SSH, Docker

Platforms

Git (CLI and SourceTree) | Atlassian Bitbucket, Confluence, and Jira | Google BigQuery | Google Analytics | Amazon S3 | Microsoft Azure | Databricks Spark | Cloudera Hive and Impala

Python Libraries Working Experience

NumPy | pandas | PySpark | Dask | Matplotlib | Seaborn | Graphviz | Pydantic and erdantic for entity relationship diagrams (ERDs) | re, spaCy, NLTK, Gensim, sklearn.preprocessing, sklearn.feature_extraction.text (text processing and analysis) | automata-lib | sklearn.linear_model (linear and logistic regression) | ArviZ, PyMC3 and Theano (Bayesian parametric estimation) | TensorFlow Keras (image classification, text generation, time series analysis) | statsmodels.tsa, pmdarima, sktime (time series analysis) | scipy.optimize,

scipy.spatial | GeoPandas, Rasterio, xarray, h3, Cartopy (vector and raster geospatial data) | Pyomo and PuLP (constrained mixed integer programming MIP optimization) | SymPy (symbolic mathematics)

Professional Experience

Canadian Tire, Toronto

Data Science Associate, June 2022 - August 2023

- Blended pure data science methods with business insights to satisfy stakeholders and gain traction for these solutions, while adhering to high standards of statistical rigor.
- Configuration using PuLP and Pyomo for optimization model for product placement on shelves according to constraints and badness rules.
- 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 a pipeline from Google Analytics for page views of products, for potential use with store similarity metrics.
- Built a data pipeline and dashboard for measuring store participation in Canadian Tire deals using SQL. Designed a table, handling a complex situation of deals, normalizing durations, and calculating the number of participating stores. Created a robust and productionizable SQL query to populate a table, which can be run periodically and analyzed as a database table in a dashboard.
- Collaborated using Bitbucket, Jira, Confluence, and Microsoft Teams for projects and communications.

Consilium Crypto, Toronto

Data Science Intern, January 2019 - April 2019

- Loaded, cleaned and feature engineer time series blockchain and exchange data for cryptocurrency pairs
- Built and tested predictive models for price and volume using logistic regression in scikit-learn.

Selected Self-Directed Projects

USCG NAIS Data Project, Toronto, 2018 - Present

- Utilized AIS data to estimate shipping activity such as the number of port visits by vessels in the US in 2022.
- Created visualizations showing positions and flows of movement, and compared data with governmental organizations.

Additional Experience

Mentored students, developed syllabus, delivered lectures, graded work. Developed communication skills to discuss technical materials with non-technical students.

Jordan Bell Tutoring, Toronto

Mathematics Tutor, January 2021 - June 2022

University of Toronto, Toronto

Mathematics Course Instructor, April 2013 - April 2017

Education

Graduate Certificate, Analytics for Business Decision Making (SAS based program), George Brown College, Toronto, 2019

Master of Science, Department of Mathematics, University of Toronto, Toronto

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

Selected Online Courses

- edX Verified Certificate for Automata Theory. CSX0005: Automata Theory
- Practical Time Series Analysis, by SUNY
- Snowflake. Hands On Essentials - Data Engineering
- Data Science with Databricks for Data Analysts by Databricks
- Modern Big Data Analysis with SQL by Cloudera
- Microsoft Azure Data Fundamentals DP-900 Exam Prep by Microsoft
- AWS Fundamentals by Amazon Web Services
- Google Data Analytics Certificate
- Open Source Software Development, Linux and Git Specialization, by The Linux Foundation
- Version Control with Git by Atlassian
- Google IT Support Professional Certificate
- Palo Alto Networks Cybersecurity by Palo Alto Networks

Selected Publications

- Bell, Jordan and Blåsjö, Viktor, Pietro Mengoli's 1650 Proof that the Harmonic Series Diverges, Mathematics Magazine, 2018. 2019 recipient of Carl B. Allendoerfer Award for expository mathematical writing, Mathematical Association of America (MAA)
- Bell, Jordan, Estimates for the Norms of Products of Sines and Cosines, Journal of Mathematical Analysis, 2013
- Bell, Jordan, Cyclotomic Orthomorphisms of Finite Fields, Discrete Applied Mathematics, 2013
- Andrews, George E., and Bell, Jordan, Euler's Pentagonal Number Theorem and the Rogers-Fine Identity, Annals of Combinatorics, 2012