

## Jordan Bell

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## 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, and time series analysis and forecasting. Solid command line and systems administration experience.

## Key Skills

- Data cleaning and engineering
- SQL data pipeline development
- Data modeling
- ETL
- Classical time series analysis (SARIMAX)
- Feature engineering for time series machine learning
- Geospatial analysis
- Data documentation and stewardship
- Technical training (developing and delivering)

## Professional Experience

### Canadian Tire, Toronto.

Data Science Associate, June 2022 - August 2023

- Blended pure data science methods with business insights to satisfy stakeholders.
- Developed store similarity metrics.
- Initiated a pipeline from Google Analytics.
- Built a data pipeline and dashboard for store participation in deals using SQL.

### Consilium Crypto, Toronto.

Data Science Intern, January 2019 - April 2019

- Loaded, cleaned, and engineered features for time series data on cryptocurrency.
- Built and tested predictive models for price and volume.

### Jordan Bell Tutoring, Toronto.

Mathematics Tutor, January 2021 - June 2022

### University of Toronto, Toronto.

Mathematics Course Instructor, April 2013 - April 2017

- Mentored students and developed course materials.

## Education

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

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

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

## Languages

- SQL (MySQL, PostgreSQL, Hive, Spark, BigQuery, Oracle, Teradata)
- NoSQL (Redis, MongoDB)
- Python

- Bash scripting and CLI tools (awk and sed for text processing with regex, gnuplot for data plotting, ImageMagick for image manipulation, ffmpeg for video editing, GDAL for GIS transformation)
- R, SAS, Excel, PowerBI DAX
- Automata theory and regular expressions, relational algebra.

## Software and Platforms

Software	Platforms
Hitachi Pentaho	Amazon S3
Talend	Microsoft Azure
KNIME	Google Cloud Platform
PowerBI	Databricks
Tableau	Cloudera
MicroStrategy	Teradata
ArcGIS, Mapbox, CARTO	Oracle
Excel, Google Sheets	Elasticsearch
git, SSH, PGP	Datadog
Docker	Redis
VMware, Virtualbox	Google Analytics
Microsoft Teams	Atlassian Bitbucket, Confluence, Jira
	H2O

## Python Libraries Working Experience

- **Data manipulation:** NumPy, pandas, PySpark, Dask, imageio, librosa
- **Data modeling:** SQLAlchemy, Pydantic, erdantic
- **Visualization:** Matplotlib, Seaborn, Graphviz
- **Regression, classification and clustering:** sklearn, scipy.spatial
- **Deep learning:** Keras, TensorFlow, PyTorch
- **Time series analysis:** statsmodels.tsa, sktime, pmdarima, tsfresh, scipy.signal
- **Text processing:** re, sklearn.preprocessing, sklearn.feature\_extraction, automata-lib, spaCy, NLTK, Gensim
- **Geospatial data:** GeoPandas, Rasterio, xarray, h3, Cartopy
- **Bayesian estimation:** ArviZ, PyMC3,
- **Numerical mathematics:** scipy.optimize, Theano
- **Symbolic mathematics:** SymPy

## Selected Personal Projects

### USCG NAIS Data Project

- Analyzed AIS data to estimate shipping activity.
- Created visualizations for maritime traffic data.
- 1-minute frequency AIS message data for 2022 for all vessels in US coastal and inland waters (2.9 billion entries)
- Feature engineering for sessionizing vessel activity

### Canada 2021 Census by Forward Sortation Areas

- Conducted clustering and regression analyses on census data.

## Selected Online Courses

- [Teradata - Intro to Advanced SQL Engine 17.10](#)
- [Datadog Fundamentals I](#)
- [Talend Data Fabric Explorer](#)
- [Containers & Kubernetes Essentials](#)

- Excel Skills for Data Analytics and Visualization by Macquarie University
- 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

### Selected Publications

Bell, Jordan, and Viktor Blåsjö. “Pietro Mengoli’s 1650 Proof that the Harmonic Series Diverges.” *Mathematics Magazine* 91, no. 5 (2018): 341–47. <https://doi.org/10.1080/0025570X.2018.1506656>. 2019 recipient of [Carl B. Allendoerfer Award](#), MAA

Andrews, George E., and Bell, Jordan. “Euler’s Pentagonal Number Theorem and the Rogers-Fine Identity.” *Annals of Combinatorics*, 2012. <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> (Cited by 250+ publications.)