

ELIJAH NATHANIEL CAVAN

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📍 Remote

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PROFESSIONAL EXPERIENCE

R & D Data Scientist

Pinnacle

📅 March 2023 –

📍 Toronto, ON

- Streamlined data management through scheduled GCP pipelines
- Innovated a Pregame handball model, outperforming the previous version by 3%.
- Wrote production-grade R-Shiny applications and packages
- Used advanced website scraping to bolster model development

R & D Data Scientist

Pittsburgh Pirates

📅 June 2022 – Nov 2022

📍 Pittsburgh, PA

- Enhanced performance prediction accuracy for MLB draft prospects by 5% through tailored machine learning models, leveraging historical MLB draft data.
- Implemented Cronbach alpha regression techniques, achieving a nuanced normalization of batter swing statistics (stability analysis)
- Engaged with advanced machine learning tools, including Keras and TensorFlow, for robust model development and optimization.

R & D Data Science Intern

Stathletes

📅 Oct 2021 – May 2022

📍 Burnaby, BC

- Engineered advanced Monte Carlo simulations to devise a betting model, accurately predicting 75% of the first round series results in the 2022 NHL playoffs.
- Combined unsupervised and supervised machine learning to innovate player classification and enhance simulation accuracy, leading to the creation of an R-Shiny dashboard showcasing goalie metrics.

Jr. Data Scientist

Backr

📅 October 2020 – May 2021

📍 Kingston, ON

- Utilized Google Cloud and Big Query for analysis of multi-million record datasets from YouTube comments. Developed a churn prediction Neural Network via Keras .
- Crafted and presented data-driven dashboards with Plotly & Dash. Conceived algorithms boosting user retention by 15 %.

Data Analyst

Loblaws

📅 Apr 2020 – May 2021

📍 Brampton, ON

- Championed a Python automation initiative, replacing VBA-Excel tasks and streamlining database interactions, resulting in over 10 hours saved weekly.
- Independently developed a Python script to automate email notifications, significantly enhancing analyst efficiency and stakeholder responsiveness.

EDUCATION

Undergraduate

University of Waterloo

📅 Sept 2013 – Mar 2017

B.Sc Mathematical Physics

Postgraduate

Wilfrid Laurier, Simon Fraser University

📅 Sept 2017 – Jan 2023

M.Sc Dynamical Systems (WLU) & Statistical Modelling (SFU)

PUBLICATIONS

- (2018) Romanian Astronomical Journal. 28. 135-150.
- (2020) Journal of Astrophysics and Astronomy. 41. 10.1007/s12036-020-09646-7.
- (2021) Astrophysics and Space Science. 366. 10.1007/s10509-021-03998-4.

AWARDS

- 2022 NFL Big Data Bowl Grand Champion
- Randy Sitter Graduate Scholarship
- Tom Bertzi Campus Citizen Nominee
- Quantum Computing Bootcamp Hackathon Finalist
- Student Satisfaction teaching award
- Waterloo Hacks - 3rd place and Manulife Challenge winner, NeurotechHA Hackathon - 1st place, UW Portal Hackathon Winner

SKILLS

- Main Development Languages

Python R Javascript SQL Matlab

- Modelling & Machine learning

scikit-learn tensorflow Keras carat
xgboost PyTorch scipy pystan

- Other

Git PyPortfolioOpt VBA/Excel
CGP MongoDB freqtrade