Raymond Romaniuk

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Education & Honors

Master of Science in Statistics   **Sept 2021 – Apr 2023**
Brock University (St. Catharines, Ontario, Canada)
- **Ontario Graduate Scholarship** (**$15,000**, top **7%** of graduate students)
- **Mathematics & Science Scholarship** (**$4,145**, exceptional entering graduate student)

Bachelor of Science in Statistics Co-op w/ Minor in Economics   **Sept 2016 – Apr 2021**
Brock University (St. Catharines, Ontario, Canada)
- **2020 Brock Co-op Student of the Year Runner-Up**
- **Highest Average** of graduating male **mathematics students** (**$160,** John and Roslyn Reed Book Prize)
- **Dean's Honours List** (**4x,** average above **80%**)

Experience

Research Assistant @ **Brock University (St. Catharines)**   **May 2023 - Present**
- Used **Python** to acquire data through the **NHL API**, and **engineered** the data for use in machine learning. Will be using machine learning methods (to be determined) to predict player performance and game outcomes.
- Future research to be done into using **Artificial Intelligence (ex. Recurrent Neural Networks)** to simulate game events.

Data Science Developer @ **Ministry of Transportation (Remote)**   **May 2021 - Aug 2021**
- Member of the Digital Data Insights team, modelling **big data** with **Python** in **Azure Databricks** and creating integral reports in **Power BI** to **visualize data** and track **KPI's**. Had the opportunity to work on a variety of projects from **data science** to **data engineering** and **data analysis**
- Made a **Power BI app** to analyze **cloud costs**, helping office leadership make changes **saving upwards of $5000 monthly**
- Participated in **research** and **development (R&D)** projects to streamline the team's **data science lifecycle** and explore the viability of technology like **AutoML's cloud machine learning** and its potential use cases
- Utilized **source control** technology such as **Azure Repos** and **GitHub** for seamless **collaboration** with teammates
- **Acquired** and **cleaned raw data**, while also building **data models** and **engineering features** for various projects

Junior Data Science Developer Co-op @ **Ministry of Transportation (St. Catharines/Remote)**   **Sept 2019 – Aug 2020**
- **Led a team of eight** people working directly with **CIO's, Deputy Minister's, and Directors** to create a **database** in **Azure Analysis Services** and three reports made of **more than 20 relevant visualizations** tracking the influx of personal protective equipment in response to the COVID-19 pandemic, **presented the solutions to the highest level of the provincial government**
- Created **regression models** in **Python** to determine the likelihood of trucking companies receiving future sanctions
- Key member of the Recovery Dashboard team tracking **KPI's** and developing **visualizations** for the provinces transportation recovery upon easing of COVID restrictions. Main stakeholders included the **Deputy Minister of Transportation**
- Constructed the **most viewed Power BI app** regarding the ministries reorganization, reaching **4000 views** in the first week

Teaching Assistant @ **Brock University (St. Catharines)**   **Sept 2021 – Apr 2023**
- Held **2-3 weekly labs** and **office hours**, and was responsible for **grading** assignments and tests
- Courses include: Experimental Design, Sampling Theory, Probability, Advanced Differential Equations, Intro Statistics, Mathematical Statistics I, Intro Combinatorics, Mathematics Integrated with Computers and Applications I

I&IT Technical Specialist Co-op @ **Ministry of Government & Consumer Services (Remote)**   **Sept 2020 – Apr 2021**
- **Consulted** with area leaders to drive the transition to **cloud centric** projects, similar to the Ministry of Transportation
- Helped enable the adoption of the **data science lifecycle** and move projects away from inefficient Excel solutions
- Assisted in the creation of **backend data models** and **new features** to optimize user reporting, by working with **subject matter experts** to understand the intricacies of the systems the **raw data** originated from

Projects

Finding the Method to the Madness Using Machine Learning   **GitHub**
- **Web scraped** college basketball data and performed **data cleaning** with **BeautifulSoup** and **Pandas** in **Python**
- Developed **Ridge and LASSO regression** models to predict a teams points scored in the March Madness Tournament
- Optimal Ridge Regression model placed in the **top 0.5%** of the **CBS Bracket Challenge**

Fitting AdaBoost Models From Imbalanced Data with Applications in College Basketball   **GitHub**
- Master's research into the effectiveness of using **alternative loss functions** and/or **synthetic data** to combat **imbalanced data** in a **binary classification** problem
- Use **machine learning methods** in **Python** including **AdaBoost** with **decision stumps** to make predictions
- Applications in predicting underdog victories in **college basketball**

White Ice Analytics   [**Website**](#)

- Created a **sports analytics website** using **HTML, CSS and JavaScript** that focuses on the historic performance of hockey goaltenders. Future iterations will include the implementation of a **custom goaltender performance metric**
- Used **Python** to perform **statistical analysis and machine learning** to find the greatest goaltender of all-time