Ali Raisolsadat (MMATH, BSc)
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Summary of Qualifications

- Demonstrated exceptional research proficiency across varied projects including sustainable development, insurance modeling, statistical analysis, insights extraction, and financial portfolio construction, showcasing expertise in conceiving and executing innovative, data-driven methodologies during 2 years of analytics and research experience.
- Effectively communicated findings and insights by utilizing advanced quantitative analysis techniques in R, including the creation of visualization tools using RShiny dashboard and Tidyverse package, and demonstrated proficiency through presentations at international conferences.
- Programming skills:
    - **R**: Proficient (+4 years, RShiny, Tidyverse, ggplot2)
    - **Python**: Intermediate (+2 years, Numpy, Pandas, PyTorch)
    - **MATLAB**: Intermediate (2 years)
    - **Java**: Intermediate (2 years, Data Structures)
    - **SQL**: Intermediate (1 year, PostgreSQL)

Relevant Experience

Canadian Centre for Climate Change and Adaptation – Charlottetown, PEI Summer 2021, 2022
Research Assistant (NSERC Grant)

- Spearheaded the development of a groundbreaking research project in collaboration with the CCCA research team, quantifying the international synergy among G7 nations using United Nations SDG data, by calculating individual country contributions to synergy and overall synergy using Euclidean distances.
- Employed cutting-edge machine learning algorithms such as LASSO/Ridge regression and employed advanced dimension reduction techniques like PCA to dissect and interpret SDG data effectively.
- Delivered presentation *IME Conference 2022*, demonstrating strong skill in presenting complex solutions to large audiences.

Veterans Affairs Canada – Charlottetown, PEI May 2020 – September 2020
Research Internship (Paid)

- Worked on longitudinal research with Dr. Julian Velez, forecasting insurance claim reimbursements for veterans' prescribed medications by utilizing time series models (e.g. ARIMA, autoregression, moving average) to produce a 5-year forecast with a 95% confidence interval, revealing critical insights for policy-making.
- Presented findings to the research team through an interactive RShiny dashboard, facilitating informed decision-making.

University of Prince Edward Island – Charlottetown, PEI Summer 2018, 2019
Undergraduate Research Assistant

- Applied advanced modeling techniques, including portfolio replication under the Black-Scholes model, to create conservative coherent risk measure, thus enhancing risk-averse portfolio management strategies
- Achieved second place while showcasing the research project at *Science Atlantic 2018* .

Relevant Projects

Exploratory Data Analysis of IMDB Movie Data February 2023 – April 2023

- Utilized data on IMDB movies, incorporating factors such as rating, genre, and box-office income, employing visualization and classification techniques for movie categorization. The findings from classification trees and projected box-office revenues suggest a trend of gradual decline in the art of cinema in recent years.

Satellite Image Classification February 2024 – April 2024

- Developed a Convolutional Neural Network (CNN), using PyTorch toolkit, specifically for satellite image classification, achieving an average test accuracy of 95%.

Education

University of Waterloo, Ontario, Canada September 2022 – October 2023
Master of Mathematics (MMATH) in Computational Mathematics, 4.0 GPA
Certificates: Google Data Analytics Professional Certificate, DataCamp Associate Data Analyst in SQL, DataCamp Data Analyst with Python

University of Prince Edward Island, PEI, Canada September 2020 – May 2022
Bachelor of Science in Actuarial Sciences, 4.0 G.P.A

University of Prince Edward Island, PEI, Canada September 2014 – May 2019
Bachelor of Science in Financial Mathematics, 3.5 G.P.A