

SETH MCGREGOR

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Education

University of Toronto

September 2019 – Present

Bachelor of Applied Science in Industrial Engineering

Toronto, Ontario

- Dean's honour list student – 3.73 GPA
- Minor in Artificial Intelligence engineering & certificate in Renewable Resource Engineering.

United World College Maastricht

September 2017 – May 2019

International Baccalaureate

Maastricht, Netherlands

Experience

Castleton Commodities International

May 2022 – Present

Quantitative Analyst Co-Op

Calgary, Alberta

- Used regression techniques to model natural gas storage levels based on weather forecasts.
- Manipulated data using SQL and pandas to gain insights into natural gas options and futures markets.
- Developed analytical tools to process large data sets for the purpose of supporting trading strategies using flask and dash apps with git version control and AWS data pipelines.

MorLAB

May 2021 – August 2021

Undergraduate Research assistant

University of Toronto, Ontario

- Conducted a literature review on optimal referral strategies to minimize cataract surgery wait times in Ontario.
- Analyzed and presented summaries of existing literature on pooled lists, discrete event simulations, and utility functions.

U of T Human Powered Vehicle Design Team

September 2019 – June 2020

Designer, Former Head of sponsorships

Toronto, Ontario

- Independently designed and manufactured the bike cranks, using Solidworks and a CNC, for the team's 2020 speedbike.
- Created marketing materials and approached and secured sponsorships for the team.

Theory of Knowledge Conference

September 2017 – January 2019

Head of Content

Maastricht, The Netherlands

- Created, delivered, and oversaw programming two years in a row for this 400 person international conference.
- Worked in a team of 12 students to run a philosophy conference with 50 facilitators and a \$10,000 operating budget.

Projects

Crossword solving AI

Winter 2022

- Implemented a Bi-LSTM neural network with concat pooling to predict crossword answers based on a given clue.
- Achieved a final top-5 accuracy of 65%, outperforming mean human performance.

Predicting and optimizing charitable contributions

Fall 2021

- Created a 95% accurate model to predict charitable contributions by zip-code using a linear regression model with lasso regularization based on data from the IRS.
- Optimized a canvassing route to visit the most charitable zip-codes while minimizing distance travelled.

Student Calendar Web App

Winter 2021

- Created a local web calendar system using Java Server Pages.
- Used JDBC connect and SQL to manage a database of calendar events and accounts.

Skills

Languages: Python, Java, C, SQL, R, AMPL, MATLAB

Other skills: Fluent in French, Solidworks, Eclipse, Excel, Access, Word, Numpy, Pandas, PyTorch, SKlearn, GIT

Extracurricular / Accomplishments

- 2021 Frosh leader
- Engineering mentor
- Former competitive mogul skier
- Founder and President of the UWC Maastricht 20-person chess club
- West Vancouver Physics Olympics champion
- Completed the Camino de Santiago 800km hike