Dylan Faelker

905-483-0304 | drfaelke@uwaterloo.ca | linkedin.com/in/dylanfaelker/ | github.com/dylpykill | dylanfaelker.com

Skills and Abilities

Languages	Java, Python, Javascript, C, CSS, HTML, C#, Scheme
Technologies	React, Pandas, NumPy, yFinance, NumPy financial, Matplotlib, XML
Software	GitHub, Eclipse, Jupyter Notebook, VS Code, Windows, Linux

Projects

Automated Investment Portfolio Generator | *Python (numpy, pandas, numpy financial, yFinance)*
- Collaborated with and led a group of developers through the design and development process of the algorithm
- Constructed a data extraction program which uses **Yahoo Finance API** to obtain information on 500 stocks
- Developed an algorithm using **pandas, numpy** and **financial analysis techniques** in order to optimize risk for a list of tickers
- Applied **multithreading** to decrease the runtime of data extraction to 7% of previous run time

Infinity Chess and Chess AI | *React, Javascript, CSS, HTML*
- Developed a interactive front-end interface using **React**, **JS** and **CSS/HTML** for a chess game
- Implemented all back-end chess in logic including en passant, pinned pieces, and a custom rule where pieces can go off the board
- Created a **Chess AI** using **searching algorithms** and **alpha beta pruning**, capable of evaluating hundreds of positions at once

Personal Website | *React, Javascript, CSS, HTML*
- Developed a responsive multi-page front-end interface using **React**, **JS** and **CSS/HTML** from scratch incorporating previous software projects all in one place and ready to use

Work Experience and Career Development

The Zero Program | September 2021 - October 2021
- Researched major issues that will affect our future in space technologies in partnership with other UWaterloo students
- Brainstormed and designed solutions for the problem of the growing amount of space debris.

Lifeguard | Town of Oakville | September 2018 - September 2021
- Maintained and improved customer relations through effective communication and support.
- Had zero emergencies during my time due to excellent communication with patrons and co-workers preventing unsafe situations

Swim Instructor | Town of Oakville | September 2019 - September 2021
- Organised lesson plans to ensure enjoyment by swimmers and development of skills.
- Led swimming lessons and evaluated proper swimming technique for children aged 0-13.

Education

University of Waterloo | September 2021 - April 2026

Candidate for Bachelor of Computer Science and Finance Management, Honours

Awards and Distinctions: Dean's Honours List; President Scholarship of Distinction

Relevant Courses: Introduction to Financial Markets and Data Analytics, Designing Functional Programs, Elementary Algorithm Design and Data Abstraction

Interests

- Running, Biking and Swimming, Chess, Managing personal investment portfolio