Dylan Faelker

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Skills and Abilities

Languages Java, Python, SQL, Javascript, C, C++, CSS, HTML, C#, Scheme, Typescript, php, R

Technologies Pytorch, Pandas, React, NumPy, Matplotlib, .NET, Bootstrap, Tailwind, SCSS, wordpress, Angular

Projects

Automated Investment Portfolio Generator | *Python (numpy, pandas)*
- Produced a 25% return over 2 months; 13% more than the market over the same period
- Collaborated with and led a group of developers through the design and development process of the algorithm
- Developed an algorithm using **pandas, numpy** and **financial analysis techniques** in order to optimize risk for a list of tickers
- Created a **React** web page to display daily performance compared to the market over different time intervals
- Applied **multithreading** to decrease the runtime of data extraction to 7% of previous run time

Infinity Chess and Chess AI | *C++, 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 logic including en passant, pinned pieces, and a custom rule where pieces go off the board
- Created a **Chess AI** using **searching algorithms**, **alpha beta pruning** and an opening book, capable of evaluating hundreds of positions at once

Work Experience and Career Development

Portfolio Analyst| CI Global Asset Management | September 2023 - December 2023
- Developed models to predict market performance using ML techniques such as **LSTM, XGBoost** leading to a 40% increase in success
- Maintained data pipelines crucial for generating daily and monthly reports

Financial Analyst| Office of the Superintendent of Financial Institutions | January 2023 - April 2023
- Research significant risks and analyze various banks to identify deficiencies in operation, compliance, capital and liquidity
- Automate the quantitative growth analysis to determine key areas in a bank saving 30 hours of work each review cycle
- Review the enterprise wide stress testing results to determine safety and soundness of large Canadian bank
- Utilized **Excel** and **Power BI** to extract data, make decisions and identify areas of high risk

Software Developer | IdeaNotion Development| May 2022 - August 2022
- Created processes for dealerships to automatically and instantly communicate with customers and schedule appointments increasing communication efficiency by 15%
- Retained strong communication and providing continuous updates with other team members while working from home
- Maintained multiple marketing websites using Wordpress and PHP, adding user friendly design to attract customers
- Wrote scripts to automatically update Etsy stock quantity and details in order to improve employee efficiency by 35%
- Implemented ability to upload and use custom avatars in a chat app using Angular, .NET and Azure CosmoDB (SQL)

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

Interests

- Rock climbing, Dragon Boat Racing, Running, Biking and Swimming, Chess