

Jason Huang

✉ jason.huang1@uwaterloo.ca 🌐 huangjason.com 📞 (416) 564-7669 in jason17huang 📺 jason17h

SKILLS

LANGUAGES: Python, C/C++, JavaScript, Bash, HTML/CSS, SQL

SOFTWARE DEV: Django, React, Redux, Bootstrap

DATA ANALYSIS: pandas, NumPy, scikit-learn, Dash

MISC: Fluent French, Public speaking, Design thinking

EDUCATION

University of Waterloo

Fall 2018 to Present

B. Computer Science, Spec. in Human-Computer Interaction

Term Dean's Honours List: Winter 2019, Spring 2020

Relevant coursework: Algorithms, Object-Oriented Programming, Data Structures, Calculus, Linear Algebra, Combinatorics & Graph Theory

EMPLOYMENT

Quantitative Models Intern, Portfolio Engineering

Sept. 2020 to Dec. 2020

Canada Pension Plan Investment Board · Toronto, ON

- Managed the allocation of over \$400 billion in CPP funds by applying **graph theory**, **linear algebra**, and **data manipulation** techniques using **Python**, **pandas** and **NumPy** to model key investment portfolio metrics
- Enhanced the scalability of quantitative investment functions by refactoring algorithmic processes to reduce runtimes and space requirements and modularizing code bases to increase cohesion
- Researched the efficacy of various **NLP models (TF-IDF, GloVe, BERT)** in extracting valuable insights from news articles and presented which option would be most effective in achieving department goals
- Performed in-depth data exploration using **principal component analysis**, **LDA topic modelling** and **k-means clustering** to refine ML models and effectively communicated findings to a non-technical audience

Python Engineer Intern, Quantitative Strategies & Risk Premia

Jan. 2020 to Apr. 2020

Canada Pension Plan Investment Board · Toronto, ON

- Developed a data analytics platform using **Python**, **pandas** and **SQL** to detect trends and outliers across millions of data and ensure clean and correct inputs to crucial investment processes
- Revolutionized the department's data-driven tools by introducing and implementing an **in-house data structure** to normalize datasets into a uniform structure and drastically improve scalability
- Redesigned data analysis projects to increase efficiency and broaden applicability of the tools by automating functionalities and updating compatibility across data sources and types

Software Engineering Intern

May 2019 to Aug. 2019

Worldsource Wealth Management Inc. · Markham, ON

- Developed a web application using **Django**, **Python** and **SQL Server** to facilitate succession planning between financial advisors
- Designed an algorithm using Python to match advisors based on profile, book of business, and clientele compatibility
- Created two calculator applications using **React**, **Redux** and **Firebase** to measure the cost and suitability of an investor's portfolio
- Researched, documented, and successfully pitched three investment tools to industry leaders and potential clients to help the company grow and retain its assets by collaborating with a team of senior executives

PROJECTS

STEMSearch: Intelligent Research Assistant

Mar. 2020

- Used **Dash** to create an intelligent academic paper recommender based on titles and abstracts with an interactive COVID-19 dashboard
- Refined **NLP machine learning model** parameters by analyzing millions of text data from arXiv and CORD-19 using **pandas** and **NumPy**
- Implemented **k-means clustering**, **TF-IDF** and **cosine similarity** with scikit-learn to recommend similar articles and extract key terms

FYOUZE: Social Media Consolidator – Hack The North 2019

Sept. 2019

- Developed a web application using Python, Selenium, Flask and various social media APIs to seamlessly integrate users' social media channels into one
- Enhanced UI/UX using HTML, CSS, Bootstrap, and JavaScript

Investment Portfolio Manager

July 2019

- Created a web application using **React**, **Redux** and **Firebase Realtime Database** to compute and compare the costs of a mutual fund portfolio
- Designed an algorithm using **JavaScript** to determine the suitability of a portfolio based on an investor's objectives and risk tolerance

WeHack: Hackathon Networking Platform – EngHack 2019

June 2019

- Conceptualized and built a web-based hackathon portal application using a **design thinking** approach
- Used **Django** to develop the application with authentication, SMS notification, and search functionalities

LEADERSHIP

Vice President · Waterloo Debate Society

Aug. 2019 to Aug. 2020

- Delivered impactful weekly lessons to coach university-level debaters in argumentation, critical analysis, presentation and more
- Set meaningful debate topics during practices to encourage critical thinking on current global issues
- Organized tournaments and workshops to engage and educate high school and university students across North America